

San Francisco Bay Conservation and Development Commission

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September 9, 2016

TO: Commissioners and Alternates

FROM: Lawrence J. Goldzband, Executive Director (415/352-3653; larry.goldzband@bcdc.ca.gov)
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**SUBJECT: Staff Recommendation on BCDP Permit Application No. 1997.001.04
(Material Amendment) to California Department of Transportation, District 4 for the
Richmond-San Rafael Bridge Public Access Improvement Project
(For Commission consideration on September 15, 2016)**

Recommendation Summary

The Commission staff recommends that the San Francisco Bay Conservation and Development Commission ("Commission" or "BCDC") approve, as conditioned herein, the California Department of Transportation, District 4 ("Caltrans") Application for Permit No. 1997.001.04. The original permit issued in 1997 authorized a major seismic retrofit of the Richmond-San Rafael Bridge ("bridge"). Three subsequent permit amendments were non-material in nature authorizing minor repairs or improvements.

Material Amendment No. Four will authorize operational changes on the bridge for up to four years, including the incorporation of a multi-use public pathway on the upper deck and vehicular travel lane on the lower deck. The amended authorization will require, among other things, that Caltrans provide and maintain approximately 202,463 square feet (4.6 acres) of public access for up to a four-year period and, prior to the conclusion of the pilot program, to the Commission on pathway usage, operation, and safety issues. Potential future changes to the temporary pathway, including making it permanent or removing or altering the pathway features, would require additional amendment(s) to the subject permit.

Commission Staff Recommendation

The Commission staff recommends that the Commission adopt the following resolution:¹

I. Authorization

- A. Subject to the conditions stated below, the permittee, the California Department of Transportation, District Four, is granted permission to do the following work at the Richmond-San Rafael Bridge (Interstate 580), which stretches between Point San Quentin in San Rafael, Marin County, and Castro Point in Richmond, Contra Costa County:

1. In the Bay:

a. Main Structure:

- (1) Excavate approximately 64,000 cubic yards of Bay muds from around the base of the piers and dispose of the material at the designated Alcatraz dredged material disposal site (SF-11), and backfill around the base of the retrofitted piers with approximately 14,000 cubic yards of rock armor (Original Authorization);
- (2) Install new piles, pile caps, and steel casings on the pier bells on piers 19 through 38 and 41 through 49, totaling approximately 41,000 square feet of solid fill (Original Authorization);
- (3) Install new piles, precast concrete jackets, and steel casings on piers 39, 40, and piers 50 through 60, excluding pier 55, totaling approximately 2,400 square feet of solid fill (Original Authorization); and
- (4) Install modified fenders on the main navigation channel, piers 34, 35, 47 and 48, and replace the fenders on the side navigation channel, piers 33, 36, 46 and 49 (Original Authorization).

b. East Approach Structure:

- (1) Excavate approximately 4,700 cubic yards of Bay muds from around the base of the piers, dispose of approximately 1,380 cubic yards of material at the designated Alcatraz dredged material disposal site (SF-11), and approximately 3,320 cubic yards at a suitable upland location and backfill around the base of the retrofitted piers with approximately 4,500 cubic yards of rock armor (Original Authorization);

¹ The recommendation includes language from the original and previously-amended permit, and revisions included through Material Amendment No. Four. Language deleted from the existing permit has been ~~struck through~~ and new language is underlined. Text that has neither been ~~struck through~~ nor underlined is language in the existing permit that remains unchanged.

- (2) Install new piles (16-inch-diameter piles) on piers 62 through 77 (Original Authorization);
 - (3) Install grade beam/footing strengthening elements on piers 66 through 74 (Original Authorization);
 - (4) Install new concrete and/or steel shaft casings on piers 62 through 77, totaling approximately 23 square feet of solid fill (Original Authorization);
 - (5) Install for the duration of construction thirteen work platforms, totaling approximately 65,000 square feet of temporary fill, and up to two access trestles, totaling approximately 37,000 square feet of temporary fill (Original Authorization); and
 - (6) Install for the duration of construction fourteen coffer dams about 5 feet away from the new pier foundations at piers 62 through 65 and piers 75R through 77R, and half of the coffer dams at piers 73R and 74R, totaling approximately 15,000 square feet of temporary fill (Original Authorization).
- c. West Approach Structure:
- (1) Excavate approximately 7,900 cubic yards of Bay muds from around the base of the piers and dispose of the material at the designated Alcatraz dredged material disposal site (SF-11), and backfill around the base of the retrofitted piers with approximately 3,500 cubic yards of rock armor (Original Authorization);
 - (2) Install new piles (approximately 12-inches-in-diameter) through the existing bell pier footings and install new pre-cast concrete shaft jackets on piers A through 18 (Original Authorization);
 - (3) Install new steel casings around the sides of the pier bells on piers A through 18, totaling approximately 664 square feet of solid fill (Original Authorization);
 - (4) Install new steel casings, piles and a pile cap on pier 19, totaling approximately 2,236 square feet of solid fill (Original Authorization); and
 - (5) Extend the existing diaphragm walls on piers A through 18 (Original Authorization).

d. Concrete Trestle Section:

- (1) Completely remove the existing trestle, which consists of 50-foot-long spans supported by five, 2-foot-in-diameter, hollow concrete piles, totaling approximately 270,000 square feet of pile-supported fill, and remove the existing 2-foot in diameter piles at the mud line;
- (2) Install a new trestle along the existing alignment with 100-foot-long spans supported by two 5-foot-in-diameter cast-in-drilled-hole concrete piles with permanent steel casings, totaling approximately 270,000 square feet of replacement pile-supported fill and 10,800 square feet of new pile-supported fill (Original Authorization);
- (3) Excavate approximately 135,000 cubic yards of Bay muds for barge access to facilitate the replacement of the concrete trestle and dispose of the material at the designated Alcatraz dredged material disposal site (SF-11) (Original Authorization); and
- (4) Install a temporary trestle between the two sections of the existing Concrete Trestle Section to facilitate pile driving and other construction activities. This trestle would extend from land at Point San Quentin for approximately 2,856 feet with an area of approximately 72,000 square feet (Original Authorization).

e. Temporarily use and moor barges adjacent to the bridge to facilitate construction as coordinated and approved by the U.S. Coast Guard (Original Authorization); ~~and~~

f. Remove abandoned wooden piles, steel pipes and concrete and asphalt debris under the East Approach section of the bridge within the existing Caltrans Right-of-Way (Original Authorization); ~~and~~

g. Westbound (Upper) and Eastbound (Lower) Bridge Decks (Material Amendment No. Four)

- (1) Use and maintain in-kind a 3.8-mile-long, 12-foot-wide shoulder on the eastbound (lower) deck as a vehicle travel lane during peak commute hours only for a period of up to four years;
- (2) Install, use and maintain in-kind up to 60 signs to inform motorists of third travel lane availability on the lower deck, and up to 34 closed-circuit TV cameras (CCTV) on the upper and lower bridge decks to monitor traffic for a period of up to four years; and
- (3) Install, use and maintain in-kind: a 3.8-mile-long, 10-foot-wide Class I, bi-directional and universally accessible public pathway at the northern side of the westbound upper deck; an adjoining 42-

inch-tall, 18-inch wide barrier separating the pathway from vehicle traffic, and an outer safety railing (north of the public pathway) measuring approximately 54 inches above the upper bridge deck and consisting of 2.5-inch diameter vertical members and horizontal cables; and associated informational signage and useage instrumentation for a period of up to four years.

2. Within the 100-foot Shoreline Band:

a. Main Structure:

- (1) Install new, eccentrically-braced frames within the steel towers (Original Authorization);
- (2) Install new friction dampers, seismic isolation joints and bearings on the towers and the deck (Original Authorization); and
- (3) Install new structural elements in the superstructure and deck to strengthen the deck, truss members, and superstructure (Original Authorization).

b. East Approach Structure:

- (1) Install new structural elements in the superstructure and deck to strengthen the superstructure and deck (Original Authorization);
- (2) Install for the duration of construction portions of the access platforms, trestles and coffer dams, temporarily covering approximately 35,500 square feet of area (Original Authorization);
- (3) Temporarily close the existing bike path which travels underneath the east end of the bridge for a maximum three-month period and install improvements including a new bench and interpretive signs as described in Special Condition II-E below (Original Authorization);
- (4) Remove abandoned wooden piles, steel pipes and concrete and asphalt debris under the East Approach section of the bridge (Original Authorization); and
- (5) Install and maintain (after-the-fact) approximately 760 linear feet of security barrier and fencing at ground-level on the north and south sides of the eastern bridge approach, consisting of a K-rail concrete barrier approximately 30 inches-tall and an adjacent six-foot-tall chain link fence (Amendment No. Two).

c. West Approach Structure:

- (1) Install new structural elements in the superstructure and deck to strengthen the superstructure and deck (Original Authorization);

- d. Concrete Trestle Section: Install approximately 2,000 lineal feet of temporary, concrete vehicle barriers (K-rails) for traffic management during construction (Original Authorization), ~~and~~;
- e. On the Marin County shoreline, north of the freeway and east of the San Rafael Rod and Gun club: Construct, use and maintain a new 23,971-square-foot public access area, consisting of six parking spaces, a picnic table and benches, a trash receptacle, two benches on a pedestrian bridge over a seasonal wetland, and landscaping, as shown in Exhibit A (Amendment No. Three); ~~and~~
- f. Westbound (Upper) and Eastbound (Lower) I-580 Bridge Approaches (Material Amendment No. Four)
 - (1) Use and maintain in-kind a 0.65-mile-long section of I-580 eastbound southern shoulder as a 12-foot-wide vehicular travel lane for a period of up to four years; and
 - (2) Install, use and maintain in-kind a 0.19-mile-long section of I-580 westbound northern shoulder as a ten-foot-wide Class I, bi-directional, universally-accessible public pathway and an adjoining 0.16-mile-long section of a 42-inch-tall, 18-inch-wide barrier to separate public path from vehicle traffic for a period of up to four years.

3. Within the Bay and 100-foot Shoreline Band:

- a. Remove remaining cement riprap and place approximately 226 lineal feet of new rock slope protection adjacent to the public access at the western end of the bridge, including the installation of 290 cubic yards of quarry rock in the Bay, covering approximately 1,960 square feet, and the installation of quarry rock in the shoreline band that covers approximately 1,890 square feet, as shown in Exhibit A (Amendment No. Three).
- B. This amended authority is generally pursuant to and limited by the permittees' application received February 14, 1997, your letter dated November 6, 2000, requesting Amendment No. One for a time extension, ~~a~~ your letter dated August 18, 2005, requesting Amendment No. Two for an after-the-fact security barrier, ~~and a~~ your letter dated December 30, 2005, requesting Amendment No. Three, ~~and your~~ letter dated March 24, 2016, requesting Amendment No. Four, including all accompanying and subsequently submitted correspondence and plans, and subject to the modifications required by the conditions herein.
- C. The work authorized by the original permit was to commence by June 30, 1999, and with the time extension authorized by Amendment No. One, ~~was~~ to be diligently pursued to completion by December 31, 2005, unless the terms of this authorization ~~are~~ were changed by a further amendment of this amended permit. The security

fence authorized by Amendment No. Two is was an after-the-fact authorization. Authorizations providing for the public access facility that is described in Special Condition II-G and modified by Amendment No. Three, shall extend to May 31, 2007.

The activities authorized in Material Amendment No. Four shall commence by September 2018, and be diligently pursued to completion by September 1, 2020, unless an extension of time is granted by amendment of this amended permit. Following installation and commencement of use, the facilities authorized in Amendment No. Four shall remain in place for up to a four-year period only unless an extension of time or other action is granted through further amendment of this amended permit. The removal of the facilities authorized in Amendment No. Four is not authorized herein, and such activity requires further amendment of the subject permit.

- D. **Original Authorization.** Overall, the project will resulted in approximately 55,800 square feet of new solid and cantilevered fill, approximately 270,000 square feet of pile-supported fill replacement, approximately 197,000 square feet of temporary, pile-supported and solid fill, and approximately 219,000 cubic yards of dredging and 22,000 cubic yards of backfill. The retrofit of the existing bridge will enable the bridge to withstand collapse from a major seismic event (estimated at a 7.25 Richter Scale earthquake with a 20-second duration on the Hayward fault, which is approximately 5 miles from the bridge, or an 8.0 Richter Scale earthquake with a 40-second duration on the San Andreas fault, which is approximately 10 miles from the bridge). The major public benefit of the project is the increased protection of people, property and transportation services from the dangers of a major earthquake and the potential for possibly opening up of the bridge to some form of public access. Further, the project includes mitigation measures to minimize the project's adverse impacts on public access, shoreline areas, fish and wildlife, water quality and the loss of Bay surface area and water volume such that the public detriments of the project do not exceed the benefit of the project to the public's health, safety and welfare (Original Authorization).

Amendment No. Four. Overall, the project will result in the in approximately 200,000 square feet of public access on the Richmond-San Rafael Bridge, and a new vehicular travel lane during peak traffic hours for an up to four-year long pilot program. All improvements will be installed on or over existing Bay fill and will, thus, not result in any net increase of fill in the Bay. The project will not result impact Bay resources nor will it affect the structural stability of the bridge designed to withstand a significant seismic event. Furthermore, has no impacts on public access, shoreline areas, fish and wildlife, water quality and the loss of Bay surface area and water volume such that the public detriments of the project do not exceed the benefit of the project to the public's health, safety and welfare.

II. Special Conditions

The amended authorization made herein shall be subject to the following special conditions, in addition to the standard conditions in Part IV:

A. Specific Plans and Plan Review

1. **Bridge Public Pathway and Associated Improvements (Material Amendment No. Four).** The improvements authorized in Material Amendment No. Four shall be built generally in conformance with the figures entitled *"Project Plans for Construction on State Highway—In Contra Costa and Marin Counties in and near Richmond and San Rafael from the Richmond-San Rafael Bridge Toll Plaza to 0.1 mile east of Sir Francis Drake Boulevard in San Rafael dated June 10, 2016, and Project Plans for Construction on State Highway—in Contra Costa and Marin Counties in and near Richmond and San Rafael from Castro Street in Richmond to Sir Francis Drake Boulevard in San Rafael," dated May 25, 2016, and prepared by HNTB Corporation. No substantial changes shall be made to these plans without prior review and written approval by or on behalf of the Commission. No further plan review is required for the work authorized in Material Amendment No. Four.*
12. **Plan Review (Original Authorization).** Work authorized herein may be completed under multiple construction contracts. No work shall commence, except for the security barrier and fence authorized in Amendment No. Two, under an individual construction contract until final plans and specifications for each specific contract have been submitted to, reviewed, and approved in writing by or on behalf of the Commission. The specific drawings and information required will be determined by the staff. To save time, preliminary drawings should be submitted and approved prior to final drawings.
 - a. **Site, Shoreline Clean-up, Architectural, Public Access, and Landscaping Plans.** Site, shoreline clean-up, architectural, public access and landscaping plans shall include and clearly label the Mean High Tide Line, the line 100 feet inland of the Mean High Tide Line, property lines, the boundaries of all areas to be reserved for public access purposes and open space, shoreline clean-up, details showing the location, types, dimensions, and materials to be used for all structures, irrigation, landscaping, drainage, seating, parking, signs, lighting, fences, paths, trash containers, utilities and other proposed improvements.

Plans submitted shall be accompanied by a letter requesting plan approval, identifying the type of plans submitted, the portion of the project involved, and indicating whether the plans are final or preliminary. Approval or disapproval shall be based upon:

- (1) completeness and accuracy of the plans in showing the features required above, particularly the Mean High Tide Line, property lines, and the line 100-feet inland of the Mean High Tide Line, and any other criteria required by this amended authorization;
- (2) consistency of the plans with the terms and conditions of this amended authorization;
- (3) the provision of the amount and quality of public access to and along the shoreline and in and through the project to the shoreline required by this amended authorization;
- (4) consistency with legal instruments reserving public access and open space areas; and
- (5) assuring that any fill in the Bay does not exceed this amended authorization and will consist of appropriate shoreline protection materials as determined by or on behalf of the Commission.

- b. **Rip Rap Plans.** No work whatsoever shall be commenced on the shoreline protection improvements authorized herein until final riprap plans have been submitted to, reviewed, and approved in writing by or on behalf of the Commission. The plans shall consist of appropriate diagrams and cross-sections that (1) show and clearly label the elevation of the mean high tide line and the datum used for the plans, property lines, grading limits, and details showing the location, types, and dimensions of all materials to be used, (2) indicate the source of all materials to be used, and (3) indicate who designed the proposed shoreline protection improvements and their background in coastal engineering and familiarity with the Commission's concerns. Approval or disapproval of the plans shall be based upon (1) completeness and accuracy of the plans in showing the features required above, (2) consistency of the plans with the terms and conditions of this permit, (3) assuring that the proposed fill material does not exceed this permit, (4) the appropriateness of the types of fill material and their proposed manner of placement, and (5) the preparation of the plans by professionals knowledgeable of the Commission's concerns, such as civil engineers experienced in coastal processes. All improvements constructed pursuant to this permit shall conform to the final approved plans. No changes shall be made

thereafter to any final plans or to the constructed shoreline protection improvements without first obtaining written approval of the change(s) by or on behalf of the Commission.

- c. **Engineering Plans.** Engineering plans shall include a complete set of contract drawings and specifications and design criteria. The design criteria shall be appropriate to the nature of the project, the use of any structures, soil and foundation conditions at the site, and potential earthquake-induced forces. Final plans shall be signed by the professional of record and be accompanied by:
 - (1) Evidence that the project design complies with all applicable Caltrans design standards;
 - (2) Evidence that an independent or in-house peer review panel has reviewed the project (except that such evidence may be waived by the staff, upon consultation with the Chair of the Engineering Criteria Review Board (ECRB), if peer review is determined not to be necessary); and
 - (3) Written certification of the professional of record that the final PS&Es satisfy the recommendations of the ECRB.

23. Conformity with Final Approved Plans. All work, improvements, and uses shall substantially conform to the final approved plans. Upon completion of seismic retrofit of the facilities authorized herein, the appropriate design professional(s) of record shall certify in writing that, through personal knowledge, the work covered by the amended authorization has been performed in accordance with the approved design criteria and in substantial conformance with the approved plans. No noticeable changes shall be made thereafter to any final plans or to the exterior of any outside fixture, lighting, landscaping, signage, landscaping, parking area, or shoreline protection work without first obtaining written approval of the change(s) by or on behalf of the Commission.

34. Discrepancies between Approved Plans and Special Conditions. In case of any discrepancy between final approved plans and Special Conditions of this authorization or legal instruments approved pursuant to this amended authorization, the Special Condition or the legal instrument shall prevail. The permittee is responsible for assuring that all plans accurately and fully reflect the Special Conditions of this authorization and any legal instruments submitted pursuant to this authorization.

Plan review shall be completed by or on behalf of the Commission within 45 days after receipt of the plans to be reviewed. Because of the importance of expediting the review of change orders once construction has commenced, the Commission will complete plan review of change orders within 15 days.

45. **Security Barrier and Fence.** The security barrier and fencing authorized in Amendment No. Two shall be built generally in conformance with the drawing entitled "Richmond San Rafael Bridge Land Based Pier 68," dated September 9, 2004, provided and prepared by Caltrans staff (Amendment No. Two).
6. **Riprap Placement.** Riprap material adjacent to the public access area shall be placed in general accordance with the preliminary plans entitled "Rock Slope Protection DD-1 and DD-2" dated March 29, 2006, so that a permanent shoreline with a minimum amount of fill is established by means of an engineered slope not steeper than two (horizontal) to one (vertical). The slope shall be created by the placement of a filter layer protected by riprap material of sufficient size to withstand wind and wave generated forces at the site (Original Authorization).
- B. **Temporary Construction Access.** Any fill placed for construction access and work platforms shall be pile-supported or floating only, and shall be approved prior to their installation pursuant to Special Condition II-A. The permittee is strictly prohibited from using solid fill in the Bay for construction access and work platform purposes with the exception of the minimum amounts necessary of earthen fill to create the minimum necessary grade transitions from the land to pile-supported work platforms.
- C. **Temporary Structures.** All temporary structures placed pursuant to this amended permit shall be completely removed from the Commission's jurisdiction upon completion of each individual project and the area(s) restored to its previous condition. Clean, untreated wooden, concrete or steel piles can be cut or broken off at the mud line.
- D. **Temporary Bicycle and Pedestrian Pathway Closure Plan.** For the activities authorized in the original permit, at least 15 days prior to the authorized closure of the existing pathway the permittee shall, pursuant to Condition II-A above, submit for approval by or on behalf of the Commission a plan(s) for the temporary closure of the existing bicycle and pedestrian pathway under the east end of the bridge. Such plan(s) shall include: (1) a schedule which minimizes the time during which the temporary closure will occur; (2) specific dates for when the closed pathway will be re-opened for public use; and (3) a program for informing the public of the temporary closure. Plan review shall be completed by or on behalf of the

Commission within 5 days after receipt of the plans to be reviewed. Further, the permittee is responsible for any and all damage to the existing public facilities and shall fully repair all damage prior to the return of the pathway to public use.

- E. **Improvements to Existing Public Access Facilities.** For the activities authorized in the original permit, prior to the closure of the bicycle and pedestrian pathway, the permittee shall install improvements near the existing public access bicycle and pedestrian pathway, pursuant to Condition II-A and II-D, above. These improvements shall include, at a minimum, one new bench on the north side of the bridge and two new informational signs, one at each point on the path where it will be temporarily closed. The information on these signs shall include, at a minimum, the information necessary to inform the public of the temporary closure as required in Special Condition II-~~D~~E above and interpretive information on the seismic retrofit of the bridge. The signs shall remain in place after project completion and be maintained by the permittee or its assignee, provided such assignee is first approved by or on behalf of the Commission, to provide information to the public which is related to the history, natural environment and/or coastal recreation opportunities of San Francisco Bay.
- F. **Public Access Enhancement on the Eastern Shoreline.** For the activities authorized in the original permit, prior to any construction authorized herein, the permittee shall create a fund in the Commission's name and deposit the sum of \$40,000.00 in an interest bearing account to be dispersed, in its entirety including principal and interest, solely to the City of Richmond for the purpose of improving public access in the vicinity of the bridge, between Pt. Molate and the Miller/Knox Regional Shoreline. Funds shall be dispersed from the account at the discretion of the Commission's Executive Director, based on proposal(s) submitted by the City of Richmond, who will be the lead agency. The East Bay Regional Park District, acting on behalf of the City of Richmond, may also submit a proposal(s) for improving public access in the vicinity of the bridge if such action and proposal(s) is first reviewed and approved by City of Richmond.

This fund shall be used to cover the costs of either securing property or access easements, and/or installing new public access improvements such as pathways, benches, trash containers, landscaping and signage. The fund may also be used for habitat enhancement adjacent to the public access improvements in the project vicinity. In the event that the public access improvements or enhancements desired between Pt. Molate and the Miller/Knox Regional Shoreline are not feasible, the Executive Director may disperse the funds to the City of Richmond to improve public access and wildlife habitat elsewhere along the City of Richmond or West Contra Costa shorelines.

G. New Public Access Area ~~on the Western Shoreline~~

On the Western Shoreline (Original Authorization)

1. **Area.** The approximately 23,971-square-foot area along approximately 226 lineal feet of shoreline north of the bridge and east of the Marin Rod and Gun Club, as shown in Exhibit A and revised by Amendment No. Three, shall be made available exclusively to the public for unrestricted public access for walking, bicycling, sitting, viewing, fishing, picnicking, and related purposes. Public access to this site can be restricted during retrofit construction because this site will likely be used as a staging area and/or for construction equipment. If the permittee wishes to use the public access area after construction for other than public access purposes, it must obtain prior written approval by or on behalf of the Commission.
2. **Permanent Guarantee.** Prior to the completion of the public access improvements described above, but in no case later than December 31, 2005, (as described in the Commission's September 22, 2004 letter to the permittee) the permittee shall by instrument or instruments acceptable to counsel for the Commission dedicate to a public agency or otherwise permanently guarantee such rights for the 23,971 square-foot public access area, shown in Exhibit A, for walking, bicycling, sitting, viewing, fishing, picnicking and related purposes. The instrument shall create rights in favor of the public which shall commence no later than after completion of construction of any public access improvements required by this amended authorization and prior to the use of any structures authorized herein. Such instrument shall be in a form that meets recordation requirements of Marin County and shall include a legal description of the property being restricted and a map that clearly shows and labels the Mean High Tide Line, the property being restricted for public access, the legal description of the property and of the area being restricted for public access, and other appropriate landmarks and topographic features of the site, such as the location and elevation of the top of bank, any significant elevation changes, and the location of the nearest public street and adjacent public access areas. Approval or disapproval of the instrument shall occur within 30 days after submittal for approval and shall be based on the following:
 - a. Sufficiency of the instrument to create legally enforceable rights and duties to provide the public access area required by this amended authorization;
 - b. Inclusion of an exhibit to the instrument that clearly shows the area to be reserved with a legally sufficient description of the boundaries of such area; and

- c. Sufficiency of the instrument to create legal rights in favor of the public for public access that will run with the land and be binding on any subsequent purchasers, licensees, and users.
- 3. **Recordation of the Instrument.** Within 30 days after approval of the instrument, the permittee shall record the instrument and shall provide evidence of recording to the Commission. No changes shall be made to the instrument after approval without the express written consent by or on behalf of the Commission.
- 4. **Improvements Within the Total Public Access Area.** As described in the Commission's September 22, 2004 letter to the permittee, the permittee shall install the following improvements by no later than December 31, 2005, as shown in Exhibit A:
 - a. An approximately 173-foot-long and 10-foot-wide, all-weather shoreline trail, including a pedestrian bridge with two benches, which crosses over a 323-square-foot seasonal wetland at the shoreline;
 - b. Six parking spaces, including one handicapped space;
 - c. One picnic table with two benches, and one trash receptacle;
 - d. New, drought tolerant landscaping throughout the new public access area. Native plant species are desirable; however, in no case shall the landscaping include exotic plant species which are known to be invasive; and
 - e. No fewer than four public access signs whose location and design is approved by the Commission, including way-finding signs for west-bound bridge traffic and Francisco Boulevard travelers. If all-day commuter or other parking problems are identified after the public access is completed, the permittee shall post signs to limit the number of hours the public may park at the site.

Such improvements shall first be reviewed and approved pursuant to Condition II-A of this amended authorization.

- 5. **Maintenance.** The areas and improvements within the new public access area shall be permanently maintained by and at the expense of the permittee or its assignee. Such maintenance shall include, but is not limited to, repairs to all path surfaces; replacement of any trees or other plant materials that die or become unkempt; repairs or replacement as needed of any public access amenities such as signs, benches, trash containers and lights; periodic cleanup of litter and other materials deposited within the access areas; removal of any encroachments into the access areas; and assuring that the public access signs remain in place and visible. Within 60 days after notification by staff, the permittee shall correct any maintenance deficiency noted in a staff inspection of the site.

- ~~6. **Riprap Placement.** Riprap material adjacent to the public access area shall be placed in general accordance with the preliminary plans entitled “Rock Slope Protection DD-1 and DD-2” dated March 29, 2006, so that a permanent shoreline with a minimum amount of fill is established by means of an engineered slope not steeper than two (horizontal) to one (vertical). The slope shall be created by the placement of a filter layer protected by riprap material of sufficient size to withstand wind and wave generated forces at the site. Final plans must be submitted and approved, in accordance with Special Condition II-A-1-b.~~

H. Public Pathway on Westbound (Upper) Richmond-San Rafael Bridge Deck and Adjoining I-580 Sections (Material Amendment No. Four).

1. **Area.** For up to a four-year period, the approximately 202,463 square foot (4.6-acre) area at a 3.8-mile section of the westbound (upper) Richmond-San Rafael Bridge deck and an adjoining 0.19-mile (total) sections of I-580 (within the Commission’s 100-foot shoreline band jurisdiction) shall be made available exclusively to the public for unrestricted access for pedestrians, bicycles, and wheelchairs. If the permittee wishes to use the public access area for other purposes, it must obtain prior written approval by or on behalf of the Commission.
2. **Improvements Within the Public Access Area.** Prior to the use of any facility authorized herein, the permittee shall install the following improvements to be consistent with the plans approved pursuant to Special Condition II.A of this amended authorization, and substantially conform to plans including those entitled *Sign Plan* (Sheets S-1 through S-14 dated June 13, 2016) prepared by HTNB Corporation.
 - a. An approximately 3.8-mile long and 10 -foot-wide path on the upper deck of the Richmond-San Rafael Bridge, and a 0.19-mile long path at adjoining sections of I-580 within the Commission’s 100-foot shoreline band;
 - b. An approximately 3.96-mile-long barrier on the upper (westbound) deck of the bridge to separate the above-referenced public path from vehicular traffic;
 - c. An approximately 3.8-mile-long, 52-inch above the bridge deck cable railing along the northern outer railing of the upper bridge deck;
 - d. No fewer than 36 public access-related informational signs, including at the entry and exit points of the bridge public path; and
 - e. Instrumentation for counting public use of pathway on bridge located at entry and exit points of the bridge.

3. **Maintenance.** The areas and facilities authorized in Material Amendment No. Four shall be maintained by and at the expense of the permittee. Such maintenance shall include, but is not limited to, repairs to all path surfaces; repairs or replacement as needed of any public access amenities such as signs and safety barriers; periodic cleanup of litter and other materials deposited within the access areas; and removal of any encroachments into the access areas. Within 30 days after notification by staff, the permittee shall correct any maintenance deficiency noted in a staff inspection of the site.
4. **Report to Commission and Future Commission Consideration.** At or around the end of the third year period of the four-year pilot program for the facilities authorized in Material Amendment No. Four, the permittee shall provide a written and verbal report to the Commission on the status of the bridge public pathway, including, but not limited to, an analysis of public usage and benefits, an assessment of any operational and safety issues, and the need for any future changes to the facilities, including removal or making them permanent. The permittee shall not remove, substantially alter, or make permanent the facilities authorized in Amendment No. Four without prior authorization by or on behalf of the Commission, through a further amendment of this amended permit.

~~H.I.~~ **Reasonable Rules and Restrictions.** The permittee may impose reasonable rules and restrictions for the use of the public access areas required pursuant to Special Condition II-G to correct particular problems that may arise. Such limitations, rules, and restrictions shall have first been approved by or on behalf of the Commission upon a finding that the proposed rules would not significantly affect the public nature of the area, would not unduly interfere with reasonable public use of the public access areas, and would tend to correct a specific problem that the permittee has both identified and substantiated. Rules may include restricting hours of use and delineating appropriate behavior.

1. **Closure of the bridge access path due to flooding.** In the event of flooding during and after major storm events at the land approaches of the bridge that may cause serious harm or danger to path users, the permittee may close the path, and shall inform the public via the 511 and 511.org systems, as soon as feasible. The path shall remain closed as long as necessary to protect users from flooding. When flooding recedes, the permittee shall immediately open and inspect the safety of the public, and inform users via the above mentioned systems.

~~H.J.~~ **Water Quality.** At least 20 days prior to the commencement of dredging authorized herein, the permittee shall inform the Executive Director that the water quality certification (Resolution No. 97-053) from the California Regional Water Quality Control Board, San Francisco Bay Region, is still effective. Revocation of such certification shall terminate the Commission's amended authorization for that

dredging. Any amendments to the water quality certification shall be approved by the California Regional Water Quality Control Board, San Francisco Bay Region, and submitted to the Executive Director at least 20 days before the start of the amended work (Original Authorization).

~~J.K.~~ **Dredging Authorization.** The approximately 219,000 cubic yards or less of new dredging authorized by this amended permit shall be completed within 60 months of the date of issuance or by December 31, 2005, whichever is earlier. No further dredging is authorized by this amended permit (Original Authorization).

~~K.L.~~ **Upland Disposal of Material Unsuitable for Aquatic Disposal.** The approximately 3,320 cubic yards of material from piers 71 through 77, which was determined to be unsuitable for aquatic disposal by the Dredged Materials Management Office and the Regional Water Quality Control Board, shall be disposed of in an appropriate manner at an upland location outside the Commission's jurisdiction. Prior to the disposal of the 3,320 cubic yards of material, the permittee shall submit to the Commission documentation which contains the proposed date and location for the disposal of this material. After the disposal, the permittee shall submit evidence that the material was disposed of in an appropriate manner (Original Authorization).

~~L.M.~~ **Dredging and Disposal Notice.** At least 20 days prior to the commencement of the dredging and disposal authorized herein, the permittee shall notify the Executive Director of the planned start and duration of these activities. The permittee shall permit the Commission staff or representatives of other state or federal agencies to come aboard the dredge or barge associated with the dredging or disposal episode and observe the operation to ensure that the dredging or disposal activity is consistent with the dredging report required herein and the other terms and conditions of this amended permit (Original Authorization).

~~M.N.~~ **Timing.** To protect important fisheries or migrating anadromous fish species, including the Pacific herring (*Clupea harengus*), the winter-run chinook salmon (*Oncorhynchus tshawytscha*), and the steelhead trout (*Oncorhynchus mykiss*), no open water suction dredging shall occur in water shallower than 20 feet pursuant to this permit between January 1 and May 31 of any year during the duration of this amended permit unless written approval of this dredging technique during this period is provided by or on behalf of the Commission and after approval by appropriate wildlife agencies prior to the commencement of the dredging during the closure. Within the cofferdams and piles there are no restrictions on reasonable dredging techniques. Clamshell dredging is allowed year-round provided a professional biologist, or other individual sufficiently competent to identify herring spawning activity, shall inspect the project site during the dredging operations occurring between December 1 and March 1 of any year, and if herring spawning is detected by the on-site biologist or qualified individual, Department of Fish and Game personnel, or the Commission staff, all dredging outside of coffer dams and piles will cease for a minimum of 14 days within a 200-meter limit or until it can be determined that the herring hatch has been completed and larval herring

concentrations have left the site. To facilitate rapid and efficient communication under these circumstances, the permittee shall provide the Commission staff and Department of Fish and Game personnel with all necessary telephone, FAX, and pager numbers. Dredging may be resumed thereafter at the sole discretion of the permittee and the Commission staff, but shall be terminated if further spawning takes place at the site (Original Authorization).

NO. Barge Overflow Sampling and Testing. Results of any effluent water quality or other testing required by the San Francisco Bay Regional Water Quality Control Board shall be submitted in writing to the Commission's office at the same time that such testing is submitted to the Regional Board (Original Authorization).

OP. Dredging Operation Plan and Updates (Original Authorization)

1. **Dredging Operation Plan.** A dredging operation plan shall be submitted at least 30 days before the start of the initial dredging operations. The plan shall contain: (a) the overall location of the area authorized to be dredged and to what depth based on Mean Lower Low Water (MLLW); (b) the proposed area to be dredged and to what depth based on MLLW; (c) a vicinity map showing the proposed disposal site; and (d) the proposed volume of material to be dredged and disposed.
2. **Updates.** Every 90 days after the start of dredging operations, the permittee shall submit to the Executive Director updates of the dredging operation plan which describe the dredging activities that occurred within the previous reporting period, including: (a) the location of the area authorized to be dredged and to what depth based on MLLW; (b) the actual area dredged and to what depth based on MLLW, and any dredging which occurred outside the area authorized to be dredged or below the authorized depths; (c) the actual volume of the material dredged; (d) a vicinity map showing the disposal site; and (e) the volume of the material disposed in the Bay. In addition, the updates of the dredging operation plan required herein shall include a plan, as described in Special Condition II-O-1 above, for the proposed dredging activities to occur during the next reporting period.
3. **Changes.** The Executive Director shall be notified of any proposed changes in the dredging operation plan 14 days in advance of the proposed change.
4. **Final Dredging Operation Plan.** Within 60 days of completion of all dredging activities authorized herein, the permittee shall submit to the Executive Director a report which contains: (a) the location of the area authorized to be dredged and to what depth based on MLLW; (b) the actual area dredged and to what depth based on MLLW, and any dredging which occurred outside the area authorized to be dredged or

below the authorized depths; (c) the actual volume of the material dredged; (d) a vicinity map showing the disposal site; and (e) the volume of the material disposed in the Bay.

5. **In-Bay Disposal.** The permittee shall only dispose of dredged material in the Bay that has been recommended for approval for in-Bay disposal by the Dredged Materials Management Office and authorized by the San Francisco Bay Regional Water Quality Control Board. Any material not approved for in-Bay disposal shall be disposed upland or in the ocean in accordance with disposal plans approved by the responsible agencies.

It is the intent of the Commission that the reports, maps and information required herein would be the same as those required by the Dredged Materials Management Office and the other applicable public agencies that manage the dredging and disposal of material in San Francisco Bay. All dredging authorized herein can be considered a single episode.

PQ. Protection of the Seal Haul-out Area. Prior to any construction authorized herein, the permittee shall submit for review and concurrence by or on behalf of the Commission, evidence that will ensure that the final construction plans and specifications for the project include mitigation measures which will minimize impacts to the harbor seals (*Phoca vitulina*) and their haul out site. The mitigation measures shall include a restricted access and a monitoring plan approved by the National Marine Fisheries Service. The permittee shall submit a copy of the Incidental Harassment Authorization issued by National Marine Fisheries Service. In addition, the name and phone number of the individual(s) at the National Marine Fisheries Service, and the parties responsible for ensuring that the restricted access and monitoring plan is followed, must be submitted to the Executive Director (Original Authorization).

QR. Coordination with Appropriate Wildlife Agencies to Minimize Impacts to Birds.

Prior to any construction authorized herein, the permittee shall submit for review and concurrence by or on behalf of the Commission, evidence, such as a contract and/or agreement with the U.S. Fish and Wildlife Service, the U.C. Santa Cruz Predatory Bird Research Group and/or the Point Reyes Bird Observatory, that will ensure compliance with the terms of the Biological Opinion issued by the U.S. Fish and Wildlife Service with respect to the peregrine falcon.

In addition, prior to any construction activities authorized herein, the permittee shall submit for review and concurrence by or on behalf of the Commission, evidence that a plan, such as handling procedures approved by the California Department of Fish and Game, in consultation with the Point Reyes Bird Observatory, designed to minimize adverse impacts to the double-crested cormorant (*Phalacrocorax auritus*) colony which exists on the support beams and scaffolding underneath the bridge, and other migratory birds nesting and breeding on the structure, is in place. Such evidence shall include the name and phone number of the individual(s) at the

California Department of Fish and Game and the Point Reyes Bird Observatory, and the parties responsible for ensuring that the handling procedures are followed (Original Authorization).

RS. Coordination with Appropriate Wildlife Agencies to Minimize Impacts to Eelgrass Beds. Prior to any construction authorized herein, the permittee shall submit for review and concurrence by or on behalf of the Commission, evidence that a plan designed to minimize adverse impacts to the existing eelgrass (*Zostera marina*) beds has been reviewed and approved by the National Marine Fisheries Service, the California Department of Fish and Game, and/or the U. S. Fish and Wildlife Service. The approved plan shall include pre- and post-monitoring surveys of the existing eelgrass beds and an experimental transplanting and relocation program if determined necessary by the wildlife agencies. Such evidence shall include the name and phone number of the individual(s) at the National Marine Fisheries Service, the California Department of Fish and Game or the U. S. Fish and Wildlife Service responsible for reviewing and approving the plan and the parties responsible for ensuring that the plan is adhered to. Any monitoring reports prepared pursuant to the approved plan shall be sent to the Commission, as well as the final report which assesses the results of the eelgrass mitigation measures (Original Authorization).

ST. Placement and Use of the Construction Barges and Coordination with the U.S. Coast Guard. Prior to the use of any barges in the Bay, the permittee shall first submit evidence that their use complies with the U. S. Coast Guard Checklist and the Dredging Operation Plan and updates required pursuant to Special Condition II-~~OP~~ (Original Authorization).

±U. Mitigation to Offset the Placement of Fill in the Bay. Prior to any construction authorized herein, the permittee shall prepare a mitigation program which will ensure the creation of new Bay surface area and water volume in the Central Bay, and shoreline clean-up adjacent to the bridge, all of which will be sufficient to offset the fill placed in the Bay as part of the project. The total cost of this mitigation program shall not exceed \$1,500,000.00 dollars, and shall include the following:

1. At the project site, the mitigation program shall create at least 1,005 cubic yards, over at least 6,176 square feet, of new Bay as the result of shoreline clean up, removal of abandoned piles or other structures, and/or by not backfilling around the newly retrofitted piers on the East Approach section of the bridge. All shoreline clean-up and fill removal is subject to final plan review approval pursuant to Special Condition II-AB above.
2. To create new Bay surface area and/or water volume off-site, the permittee shall create a fund in the Commission's name and deposit the initial sum of \$750,000.00 in an interest bearing account to be dispersed, in its entirety including principle and interest, solely to remove approximately one acre of dilapidated, pile-supported structure or other

fill from the Central Bay. Funds shall be dispersed from the account at the discretion of the Commission's Executive Director, based on proposal(s) submitted by an owner of such filled lands in the Central Bay. The amount of this fund may be adjusted depending upon the relationship between costs and environmental benefits associated with the improvements in the Bay required under Special Condition II-~~T~~U.

This fund shall be used to cover the costs of planning, environmental assessments, demolition and appropriate disposal of the dilapidated fill. The fund may also be used for habitat enhancement in the areas disturbed by the fill removal and in the project vicinity. Priority shall be given to fill removal projects located near the Richmond-San Rafael Bridge and secondly in the Central Bay. In the event that fill removal projects are not feasible in the Central Bay, the Executive Director may disperse the funds to another entity for use outside the Central Bay, provided that the entity first proves that it has a feasible fill removal project, sufficient legal interest over the fill to be removed, and that it is capable and competent to carry out the subject fill removal project (Original Authorization).

~~U~~V. **Creosote Treated Wood.** No pilings or other wood structures that have been pressure treated with creosote shall be used in any area subject to tidal action in the Bay or any certain waterway, in any salt pond, or in any managed wetland within the Commission's jurisdiction as part of the project authorized herein (Original Authorization).

~~V~~W. **Bridge Railings.** Any new or replacement bridge railings on the concrete trestle section of the bridge shall not exceed 32 inches in height unless a higher bridge railing is necessary to accommodate pedestrian, bicycle or wheelchair access across the bridge. Bridge railings shall be designed to provide motorists with views of the Bay. The design of the bridge railings must be reviewed by or on behalf of the Commission to ensure this objective is achieved and shall not be installed until the design is approved in writing.

1. **Material Amendment No. Four.** This amended permit result authorizes the permittee to install a cable railing that is 52-inches in height along all sections of the bridge as part of the public path. The height of the railing is necessary to protect the safety of public path users. Any changes in design must be reviewed by or on behalf of the Commission to ensure views of the Bay are protected, and shall not be installed until the design is approved in writing.

~~W. Debris Removal.~~ All construction debris shall be removed to a location outside the jurisdiction of the Commission. ~~In the event that any such material is placed in any area within the Commission's jurisdiction, the permittee, its assigns, or successors in~~

~~interest, or the owner of the improvements, shall remove such material, at its expense, within ten days after it has been notified by the Executive Director of such placement.~~

- X. **Notice to Contractor.** The permittee shall provide a copy of this amended permit and final PS&Es to any contractor or person working in concert with the permittee to carry out the activities authorized herein and shall point out the special conditions contained herein (Original Authorization and Amendment No. Four).
- Y. **Certification of Contractor Review.** Prior to commencing any grading, demolition, or construction, the general contractor or contractors in charge of that portion of the work shall submit written certification that s/he has reviewed and understands the requirements of the permit and the final BCDC-approved plans, particularly as they pertain to any public access or open space required herein, or environmentally sensitive areas.
- ~~Y. **Construction Operations.** All construction operations shall be performed to prevent construction materials from falling into the Bay. In the event that such material escapes or is placed in an area subject to tidal action of the Bay, the permittee shall immediately retrieve and remove such material at its expense.~~
- ~~Z-Z.~~ **Commission Jurisdiction Over Fill Area.** Notice is hereby given that, under the McAteer-Petris Act, the area of the approved project that is within the Commission's jurisdiction under Section 66610(a) remains within that jurisdiction even after fill or substantial change in use, authorized by the Commission, may have changed the character of the area; so that the permittee or the permittee's successors in interest will require further action by or on behalf of the Commission prior to any future change of use or work within areas filled pursuant to this authorization.
- AA. **Recording.** The permittee shall record this document or a notice specifically referring to this document or the amended permit with Marin County and Contra Costa ~~Countyies~~ within 30 days after execution of the amended permit issued pursuant to this amended authorization and shall, within 30 days after recordation, provide evidence of recordation to the Commission.

III. Findings and Declarations

This amended permit is issued based on the Commission's findings and declaration that the authorized work is consistent with the McAteer-Petris Act, and the *San Francisco Bay Plan*, the California Environmental Quality Act, and the Commission's amended management program for the San Francisco Bay segment of the California coastal zone for the following reasons:

Original Authorization

- A. **Use.** The basic purpose of the new fill is for the seismic retrofit of the existing Richmond-San Rafael bridge. As stated in the McAteer-Petris Act, bridges are considered a water-oriented use. Thus, the fill involved in this project is consistent with the use requirements of the McAteer-Petris Act.
- B. **Fill.** Section 66605 of the McAteer-Petris Act, in part, provides that "further filling of San Francisco Bay should be authorized only when public benefits from fill clearly exceed public detriment from the loss of the water areas and should be limited to water-oriented uses (such as...water-oriented recreation...) or minor fill for improving shoreline appearance or public access to the Bay....That the fill in the Bay should be authorized only when no alternative location is available for such purposes....That the water area...to be filled should be the minimum necessary to achieve the purpose of the fill....That public health, safety and welfare require that fill be constructed with sound safety standards which afford reasonable protection to persons and property...."

The project will result in approximately 55,800 square feet of new solid and pile-supported fill, approximately 270,000 square feet of pile-supported replacement fill, and approximately 197,000 square feet of temporary, pile-supported and solid fill.

- 1. **Alternative Upland Location.** Because the retrofit will occur along the same alignment of the existing bridge, no alternative upland locations exist for the project. Further, mass transit alternatives will not achieve the basic purpose of the project, which is to improve public safety of an existing bridge.
- 2. **Minimum Necessary Fill.** In designing the project, Caltrans needs to reduce the probability that the bridge will collapse in a major earthquake. During the seismic modeling and analysis of the existing bridge, Caltrans determined that the retrofit must limit the displacement of the pile-supported foundations during an earthquake. Therefore, the majority of new solid fill, approximately 45,000 square feet, is necessary to enlarge the approximately 70 sets of piers with new piles, pile caps and casings. Caltrans also determined that the existing, approximately 3,250-foot-long, concrete trestle section of the bridge should be replaced rather than retrofitted, largely because of persistent concrete deterioration and because the additional costs and time for retrofit of the existing trestle are outweighed by the benefits of a new trestle. The replacement of the existing concrete trestle is responsible for the remainder of the new fill associated with the project, resulting in approximately 10,800 square feet of pile-supported fill. (The existing trestles currently cover approximately 270,000 square feet of Bay surface area, the new trestles will cover approximately 280,800 square feet of Bay surface area). Each new trestle will have two, 22-inch-wide safety barriers; two, 12-foot-wide travel

lanes; one, 10-foot-wide shoulder on the outside; and one new, 6-foot wide shoulder on the inside for a total trestle width of 43 feet, 8 inches. The existing trestles have two, 12-foot-wide travel lanes; one, 12-foot-wide shoulder on the outside; two, 39-inch-wide safety barriers; and no shoulder on the inside lane for a total trestle width of 42 feet, 6 inches. Therefore, the increase in cantilevered fill is the result of a one-foot, 2-inch increase in the width of the concrete trestle sections along their entire length.

The increase in cantilevered fill over the Bay is not significant given the scope of the entire project. The narrower safety barriers will further increase the roadway width on the trestle which could also improve public access possibilities on this section of the bridge. Still, to ensure the fill does not exceed this amended authorization, the Commission finds that Special Condition II-A, for final plan review, is needed. Therefore, as conditioned, the Commission finds that the retrofit of the existing bridge constitutes the minimum necessary fill needed to serve the project purpose.

3. **Safety of Fills.** Section 66605(e) of the McAteer-Petris Act, in part, provides “[T]hat public health, safety and welfare require that fill be constructed in accordance with sound safety standards which will afford reasonable protection to persons and property against the hazards of unstable geologic or soil conditions...” In addition, the Bay Plan includes findings and policies to ensure the safety of all new fills in the Bay. The Bay Plan states, in part, “[T]o reduce risk of life and damage to property, special consideration must be given to construction on filled lands in San Francisco Bay A proposed project should be approved by the Commission if its Engineering Criteria Review Board (ECRB) determines that the proposed project is in accordance with the [Bay Plan] policies for Safety of Fills....Even if the Bay Plan indicates that a fill may be permissible, no fill or building should be constructed if hazards cannot be overcome adequately for the intended use in accordance with the criteria prescribed by the Engineering Criteria Review Board.” The Commission relies on the advice of the ECRB to assure that approved projects are consistent with Bay Plan policies on safety of fills.

The project was reviewed by the Commission’s ECRB at its January 31, 1996 and May 29, 1996 meetings. The performance criteria presented to the Board targeted a “no collapse” scenario for the bridge in a 7.25 Richter Scale earthquake with a 20-second duration on the Hayward fault, which is approximately 5 miles from the bridge, or an 8.0 Richter Scale earthquake with a 40-second duration on the San Andreas fault, which is approximately 10 miles from the bridge. Under these criteria, the bridge would provide limited emergency vehicle and repair

equipment access within days and full service within months, possibly a year. Significant damage to the superstructure was considered acceptable as this bridge is not classified by the California Department of Transportation as a “lifeline structure.”

The soil characteristics at the site were described as ranging from Franciscan Bedrock at the east end of the bridge (Castro Rock and Red Rock being examples of where the bedrock is at or above the surface of the Bay) to extremely soft Bay muds up to 75 feet deep at the west end of the bridge. Additional layers of silty clay sands and gravel, including the San Antonio Formation, Merritt sands, (which have high liquefaction potential), and the Alameda Formation, are between the Bay muds and the bedrock ranging from depths of 25 feet to 100 feet, and in a few cases up to 280 feet deep. The anticipated ground motions expected at the site were discussed by the ECRB members in detail, including the target rock response spectra, the rock motion and mudline time history, and the soil/foundation interaction time history. Analysis of the site characteristics demonstrated that the motions coming from the rock into the structure generally will create the greatest vertical loads on the bridge, while the motions from the muds generally will create the greatest horizontal loads on the bridge.

The philosophy behind the bridge structure itself and its retrofit was also discussed by the ECRB members in detail. One aim of the retrofit is to create predictable and reliable ductile “fuses” which will protect the superstructure (the cantilevered and truss sections of the bridge). This will involve controlling tower rocking by strategically adding isolation bearings, dampers and hinges on the towers as well as strengthening the towers themselves. In addition, a number of new structural elements will be added to strengthen the superstructure. In response to questions asked by the ECRB, the permittee stated that concrete and steel plates will be added and overlapped at all the tower legs to distribute the loads vertically, thereby preventing failure at the tower legs. Further, in response to the ECRB, the permittee stated that liquefaction, the anticipated mud loads and the varying time histories across the length of the bridge were analyzed, and that the performance criteria and retrofit philosophy were regularly reviewed at a State level peer review group once a month.

Based on the presentation given by the permittee, the ECRB found that, in its opinion, it is reasonable to conclude that the project will be constructed to a level of seismic safety and tidal flood protection consistent with and appropriate to its intended use.

To ensure the final project plans meet the criteria approved by the ECRB, the Commission finds that Special Condition II-A, for final plan review, is needed. Therefore, as conditioned, the Commission finds that the retrofit of the existing bridge will afford reasonable protection to persons and property against the hazards of unstable geologic or soil conditions.

4. **Mitigation.** In part, Section 66605 of the McAteer-Petris Act requires that the public benefits of the project clearly outweigh the detriments caused by any Bay fill. In order to make the legal findings necessary to authorize a development requiring fill, the Commission has occasionally found it necessary to require mitigation to assure that the public benefits of the fill clearly exceed the adverse impacts of the fill.

The *San Francisco Bay Plan* requires that a permittee offset the unavoidable adverse impacts of fill through a variety of mitigation techniques. In part, the Bay Plan, states: “Whenever mitigation is needed, the mitigation program should be provided as part of the project. Mitigation should consist of measures to compensate for the adverse impacts of the fill to the natural resources of the Bay, such as to water surface, volume or circulation, fish and wildlife habitat or marshes or mudflats. Mitigation is not a substitute for meeting the other requirements of the McAteer-Petris Act concerning fill. When mitigation is necessary to offset the unavoidable adverse impacts of approvable fill, the mitigation program should assure: (a) that benefits from the mitigation should be commensurate with the adverse impacts on the resources of the Bay and consist of providing area and enhancement resulting in characteristics and values adversely affected; (b) that the mitigation would be at the fill project site, or if the Commission determines that on-site mitigation is not feasible, as close as possible; (c) that the mitigation measures would be carefully planned, reviewed, and approved by or on behalf of the Commission, and subject to reasonable controls to ensure success, permanence, and long-term maintenance; (d) that the mitigation would, to the extent possible, be provided concurrently with these parts of the project causing adverse impacts; and (e) that the mitigation measures are coordinated with all affected local, state, and federal agencies having jurisdiction or mitigation expertise to ensure, to the maximum practicable extent, a single mitigation program that satisfies the policies of all the affected agencies....”

Further, a report prepared by the Commission, entitled “Commission Mitigation Practices,” dated 1987, states, in part, that nearly all permits issued by the Commission for bridges have provided mitigation. The report explains that, in addition to the shading of tidal environments, bridges can present a significant barrier to wildlife. Further, environmental impacts resulting from submerged and pile-supported fill

include changes in substrate which affect the kinds and numbers of benthic organisms that live in an area, alteration of currents and water circulation, sometimes leading to the creation of underwater mounds.

The project will result in approximately 55,800 square feet of new solid and pile-supported fill, approximately 270,000 square feet of pile-supported replacement fill, and approximately 197,000 square feet of temporary, pile-supported and solid fill. Because of the size of the project, its many components, and the length of time (40 years) in which the natural environment has become acclimated to the bridge, the adverse impacts to the Bay, fish and wildlife and water quality from the project were analyzed independently. Potential adverse impacts to fish and wildlife and associated mitigation measures are discussed in the “Fish and Wildlife” Section below. Similarly, the potential adverse impacts to water quality and associated mitigation measures are discussed in the “Dredging and Water Quality” section below.

In terms of the loss of Bay surface area and water volume, the largest impact is from the retrofitting the approximately 70 sets of bridge piers, nearly all of which would occur below the surface of the water. The loss of water surface area would occur primarily from the “casing” of the existing shafts stemming from the enlarged footings. In addition, the replacement of the concrete trestle section of the bridge will result in a net decrease of the Bay’s surface area (by approximately 10,800 square feet) from new pile supported fill. The largest loss of Bay surface area will result from the temporary fill for work platforms and coffer dams, which totals approximately 197,000 square feet of pile-supported and “solid” fill (while coffer dams are not actually the complete replacement of water area with solid fill, they effectively exclude the Bay from the area within the coffer dam, creating a similar impact). While the permittee cannot predict at this time the length of time the temporary fill will remain in place, the project is not anticipated to be completed for at least 4 or 5 years and it is not unreasonable to expect much of the temporary fill to be in place for the duration of the project. However, portions of the temporary fill are proposed to be removed once construction activities are complete, and all the temporary fill may not have be in place at the same time or for the same duration. Still, there is no standard measurable way to quantify how the placement of the temporary fill will impact the environment of the Bay.

The mitigation package to offset the unavoidable adverse impacts resulting from the loss of Bay surface area and water volume, as proposed by the permittee, includes increasing the water area and volume adjacent to the newly retrofitted piers, a financial contribution to the Commission for the purposes of removing approximately one acre of

pile-supported or other fill from the Bay and the clean-up of wooden piles, steel pipes and asphalt and concrete debris on the shoreline and in the Bay underneath the East Approach of the bridge. This clean-up work will result in the removal of approximately 901 square feet, or 15 cubic yards, of fill from the Bay, and the new Bay created adjacent to the newly retrofitted piers will equal approximately 7,280 square feet, or 830 cubic yards of new Bay. Because final shoreline clean-up plans are not available at this time, the Commission finds that Special Condition II-A is needed to ensure that the clean-up and fill removal portions of the project are successful.

The permittee explored the possibility of removing fill in the Bay near the project site and found that there were no practicable fill removal projects, primarily due to ownership, contamination and environmental review reasons. Further exploration of fill removal possibilities away from the project site revealed that the Port of San Francisco has some dilapidated pile supported fill structures which could be removed at a cost of approximately \$10.00 to \$25.00 a square foot. Still, because of the ownership, contamination and environmental review issues which would need to be resolved before any fill could be removed, it is impracticable at this time to specify an exact fill removal project. The permittee has proposed and is required herein to spend approximately \$1,500,000.00 to mitigate for the fill placement, of which \$750,000.00 will be deposited in an account solely for fill removal. It is estimated that \$750,000.00 to \$1,000,000.00 will be sufficient to remove approximately one acre of pile supported fill in the Bay. One acre of pile supported fill removed from the Bay, in combination with the other mitigation measures proposed and required herein adequately offsets the loss of Bay surface area and water volume resulting from the project.

To ensure the financial contribution portion of the mitigation program is carried out adequately, the Commission finds that Special Condition II-T, which requires the permittee do create an interest bearing account in the Commission's name for the purposes of removing fill, is needed. Therefore, as conditioned, the Commission finds that the retrofit of the existing bridge includes an adequate mitigation program which compensates for the adverse impacts of the fill to the water surface, volume and circulation of the Bay.

5. **Conclusion.** In conclusion, based on the above discussions and as conditioned herein, the Commission finds the public benefits of the original project clearly outweigh the detriments caused by the Bay fill, and the project is consistent with the Commission's laws and policies on the placement of fill in San Francisco Bay.

- C. **Maximum Feasible Public Access.** Section 66602 of the McAteer-Petris Act states that: "...existing public access to the shoreline and waters of the...[bay]...is inadequate and that maximum feasible public access, consistent with a proposed project, should be provided...."

The *San Francisco Bay Plan* also includes findings and policies that require public access to and along the shoreline of the Bay. The Bay Plan, in part, states: "...maximum feasible public access to and along the waterfront should be provided in and through every development in the Bay or on the shoreline...except in cases where public access is clearly inconsistent with the project because of public safety considerations or significant use conflicts. In these cases, access at other locations, preferably near the project should be provided....Federal, state, regional and local jurisdictions...should cooperate to provide new public access, especially to link the entire series of shoreline parks and existing public access areas....[A]gencies should assure that provisions for public access to and along the shoreline are included as conditions of approval and that the access is consistent with the Commission's requirements and guidelines." Further, Bay Plan Map No. ~~11~~ 4 designates the Richmond-San Rafael Bridge as a scenic highway.

1. **Public Access Across the Bridge.** Generally, to meet the requirements of Section 66602 of the McAteer-Petris Act, the Commission has required that new bridges and major improvements to existing bridges across the Bay include a bicycle and pedestrian pathway. Further, the Richmond-San Rafael Bridge is designated as a "proposed [planned] Bay Trail" by the California State Coastal Conservancy and the Association of Bay Area Government's Bay Trail project. The Bay Plan's findings and policies on Transportation also recognize the heavy use of the automobile in the Bay Area and its attendant environmental problems and, therefore, the Plan recommends that a primary goal in transportation planning, from the point of view of preserving and properly using the Bay, should be a substantial reduction in the dependence on the automobile and the development of new systems of transportation that can carry large volumes of people.

Likewise, Section 888.2 of the Streets and Highways Code (which is administered by Caltrans) states, in part, "The department shall incorporate non-motorized transportation facilities...where non-motorized facilities do not exist, upon the finding that the facilities would conform to the California Recreational Trails System Plan..." Furthermore, Section 885.2 of California's Streets and Highways Code finds and declares, in part, that "[t]he design and maintenance of many of our bridges and highways present physical obstacles to the use of bicycles....[t]he bicycle is a legitimate transportation mode on public roads and highways....[and][b]icycle transportation can be an important, low-cost strategy to reduce reliance on the single passenger automobile

and can contribute to a reduction in air pollution and traffic congestion.” Section 30112 of the Streets and Highways Code also states, in part, “It is the intent of the Legislature, in enacting this section, to provide for the use of toll bridges by both pedestrians and bicycles, whenever this is economically and physically feasible.”

It should be noted, however, that these sections of the Streets and Highways Code, while indicating the State’s desire to provide for bicycle and pedestrian access over a toll bridge like the Richmond-San Rafael Bridge, they do not apply directly to the seismic retrofit of existing structures and are aimed more at the construction of new facilities. Other civic organizations which actively support the addition of some form of access over the bridge include the East Bay Regional Park District and the Bay Area Air Quality Management District. In fact, the *Bay Area ‘94 Clean Air Plan*, adopted by the Bay Area Air Quality Management District, includes policies and transportation control measures to improve bicycle access and facilities which state, in part, “[e]ncourage Caltrans to accommodate bicycles on all bridges,” and “[p]rovide direct access for bicycles on any new or modified bridge construction.” Many bicycle organizations, including the Regional Bicycle Advisory Committee of the San Francisco Bay Area, the East Bay Bicycle Coalition, the International Mountain Bicycling Association, the Bicycle Friendly Berkeley Coalition, the San Francisco Bicycle Coalition, the Bicycle Friendly Kid Coalition and the Bike the Bridge! Coalition, strongly support the addition of unrestricted bicycle access across the bridge and state that such access would help achieve many of the goals and objectives of agencies and organizations listed above.

The existing bridge was built in the late 1950’s, before the Commission was created, and was, therefore, not designed to accommodate public access. Pedestrian and bicycle use on the bridge is currently prohibited for safety reasons. The original project, which is the retrofit of the existing structure to withstand collapse in a future earthquake, will not change the existing road configuration on the bridge (other than re-striping the lanes to create a new two-foot shoulder on the inside and a 10-foot shoulder on the outside), will not change the use or capacity of the bridge, and will not include any improvements for pedestrian and bicycle use on the bridge. One exception is the replacement of the concrete trestle portion of the bridge. The replacement of the trestle represents approximately one-half mile of new bridge across the Bay. However, the new trestle will be put back in the same location and will have an almost identical road configuration as the portion to be removed. Simply stated, the original project would have no impact on existing bicycle or pedestrian access across the bridge or on the potential

for providing such access across the bridge in the future (It should be noted that the project considered and authorized in Material Amendment No. Four of this permit results in a temporary change to public access on the bridge, as discussed later in this amended permit).

Under the new retrofit laws, the strengthening of these vital transportation structures have been deemed to be an emergency and any special condition which could potentially significantly hinder or delay the retrofit of such structures should not be imposed by a permitting agency as it would be detrimental to the public's health, safety and welfare.

When the Commission reviewed the original project, probably the biggest reason for prohibiting bicycle and pedestrian access across the bridge is that it has not been studied to address issues, associated with motorist and non-motorists sharing a lane on a toll bridge. Vehicle speeds on the bridge often exceed 65 m.p.h. and the bridge is often buffeted by gusty winds throughout the year. There is also concern about the hazards the existing expansion grates create for skinny-tired bicycles and that the railing design may not be adequate to keep a bicyclist or pedestrian from accidentally falling off the side of the bridge. The addition of such access could therefore create new safety considerations for motorists as well as non-motorists and could create new liability issues for the permittee unless the new access were designed and constructed to meet the rigorous safety standards adopted by Caltrans and the Federal Highways Administration. In addition, any new access would also have to meet the requirements of the Americans with Disabilities Act.

Unlike other bridges in the Bay Area, the Richmond-San Rafael Bridge has an extra lane which is not used as a vehicle travel lane. This lane would be a logical place to provide public access. However, this lane still serves important roadway functions, such as acting as a breakdown lane and a maintenance lane, and the permittee states that these uses would still have serious safety implications for pedestrians or bicycles using the lane. This lane is also used illegally by impatient commuters who pass waiting vehicles on the right; this activity could potentially be very dangerous to bicycles and pedestrians if they were in the lane. Lastly, the permittee states that since the bridge was not originally designed to provide non-motorized access, the existing entrance and exit ramps of the bridge would need to be studied and possibly re-designed to make them safe for non-motorized access on the bridge.

On the other hand, there are numerous reasons for providing access across the bridge. Non-motorized travel in the vehicle breakdown lane and maintenance lane would be similar to non-motorized travel on the shoulder of countless miles of roadway throughout the State of

California. According to a representative of the Caltrans Bicycle Facilities Division, over 1,000 miles of the 4,000 miles of the State's freeway shoulders are open to bicycles. The accident ratio between vehicles and bicyclists is estimated to be very low; however, no statistics are kept on the number of bicyclists who use the freeways.

Perhaps the greatest reason for providing access on the bridge is the availability of the existing 12-foot-wide curb lane which is not used for vehicle travel. It provides a big "shoulder" which can be used for non-motorized travel. The curb lane was used for vehicle travel up until the late 1970's when an emergency water pipeline from the East Bay to Marin County was installed during the severe drought years. After the rains returned and it was determined that the emergency water pipeline was no longer necessary, the pipeline was removed. The curb lane was not reopened because the traffic volumes did not require it, and it was determined that the curb lane serves the functions of the bridge better as maintenance and breakdown lane. Still, many people look at the "unused" lanes in each direction on the bridge as a non-motorized vehicle and recreational opportunity.

Whenever possible, Caltrans and the Federal Highway Administration prefer highway shoulders to be at least 10 feet wide. Exceptions to this shoulder width can be found throughout the State. For instance, the Antioch Bridge has only a 4-foot, 6-inch-wide shoulder adjacent to the vehicle travel lanes and this shoulder is open to bicycles. The Caltrans' standard for the width of Class I separated bike path is 3.6 meters, or approximately 12 feet. The Bay Trail standard for the width of the Bay Trail is 12 feet. The standard width for a Class II bike lane on a roadway where parking is prohibited is 1.2 meters, or approximately 4 feet. Class III bikeways are shared facilities with motor vehicles where bicycle usage is secondary and this width is dependent on many factors. Because the existing curb lane is 12 feet wide, it exceeds the preferred shoulder width standards for highways as well as the preferred bike path and bike lane width standards. As evidenced elsewhere in the State, and as pointed out in the public testimony at the public hearing for the project, bicyclists and pedestrians often share a roadway shoulder with the occasional broken down vehicle or maintenance activity, and this shared use is not in itself prohibitive to access along highways.

Still, improvements to the curb lane on the bridge could only make it safer for bicycles and pedestrians. Such improvements, in no particular order, include new steel plates placed over the existing expansion grates in the roadway, increased railing heights, new signs alerting drivers to the presence of bicyclists or pedestrians on the bridge and cautioning cyclists and pedestrians to proceed at their own risk, new road surface painting

which would clearly delineate the curb lane for non-motorized travel, new pylons further delineating the curb lane, and a solid concrete barrier running the length of the bridge or another technique to completely separate a bicycle and pedestrian facility from the vehicle travel lanes. These improvements, with the exception of the separated bicycle and pedestrian facility, are mostly inexpensive and could likely be constructed with materials left over from retrofit project construction. It is possible that the total cost for providing minor safety improvements on the bridge for bicyclists and pedestrians could cost less than one percent of the entire total project cost.

Another argument for providing access across the bridge is that there are generally no alternatives for bicycles and pedestrians to travel between Marin County and Contra Costa County. One would have to ride across the Golden Gate Bridge and take BART underneath the Bay to get from one side of the Bay to the other. A trip from Richmond to San Rafael over the bridge would cover approximately 10 miles. The trip via the Golden Gate Bridge and BART would be approximately 30 miles. If one were to travel north around San Pablo Bay, the journey could be as long as 40 to 50 miles. Shuttle service for bicycles across the bridge was recently discontinued. Caltrans argues that a low demand for the shuttle service by bicycles prompted it to discontinue its use, while the bicyclists argue that the service was very inconvenient and unreliable and, therefore, led to cyclists having to use other methods for crossing the Bay between Richmond and San Rafael. Bus service across the bridge has also been considered inadequate by the bicycling community in large part because of its infrequent scheduling and limited service on weekends and nights. In addition, bicyclists have also complained that, when the busses are full and there is no room for their bicycles, they are unable to board the bus.

Even though there is no direct pedestrian and bicycle access across the bridge now there is still evidence of a demand for such access. This has been shown by the numbers of people who continue to cross the bridge on bicycles even though it is illegal and the large number of people who turned out at the public hearing and have written letters in support of such access. It has also been suggested that if such a facility is built, it would increase the demand for it. The addition of such access will provide a new recreational opportunity desired by region which is consistent with the goals and objectives of numerous agencies and organizations throughout the Bay Area. It would also open up new recreational opportunities for the underprivileged communities in Richmond and San Rafael, and it would especially cater to people without automobiles. Further, it would provide excellent bicycle and pedestrian links to the planned Pt. Molate park and recreational opportunities just to the north of the bridge on the eastern shoreline.

Bicycles are a proven, effective and efficient form of transportation in the Bay Area. Multi-modal transportation is consistent with many of the goals and objectives of local and regional planning agencies, and bicycle transportation is one of the key elements of multi-modal transportation. It is widely known that bicycle travel can be good for one's health, does not waste non-renewable sources of energy, is non-polluting and can reduce traffic congestion.

After the retrofit work is done on the Richmond-San Rafael Bridge, it is unlikely that Caltrans would need to undertake another project on the bridge which would allow the Commission to analyze the need to provide bicycle and pedestrian access over the bridge. The retrofit work would ideally extend the life of the bridge structure 50 or more years. In addition, because of the existing land use patterns in Marin County and Contra Costa County, the likelihood for increased vehicle trips over the bridge in the near future that would require expanding the capacity of the bridge is very low. Therefore, now is the opportune time to pursue bicycle and pedestrian access across the bridge.

The Commission finds that there are many laws and policies, including laws and policies which Caltrans operates under, and especially the Commission's laws and policies, which state that bicycle and pedestrian access should be considered in transportation projects and should be provided wherever feasible. If another project were proposed for the Richmond-San Rafael Bridge of this cost (\$305,000,000.00), the Commission would likely require the permittee to provide a Class I bike path across the bridge which would link with the Bay Trail on each side of the Bay as part of the project.

The Commission has analyzed the public access issue and found that the provision of bicycle and pedestrian access across the bridge is desirable and would maximize the project's public access benefits. However, at the August 7, 1997, Commission meeting the permittee voluntarily stated that it would use its best efforts to provide public access across the Richmond-San Rafael Bridge, as follows:

The original permit contained a finding that stated, as follows:

By December 31, 1997, but in no event later than December 31, 1998, Caltrans will submit to the Commission a study, prepared by or on behalf of Caltrans in consultation with the Metropolitan Transportation Commission (MTC) and the Commission staff, which will determine the feasibility of providing pedestrian, bicycle and wheelchair access across the bridge. Provided the study determines that some access is feasible, Caltrans will, by December 31, 1999, submit to the Commission an implementation program which will ensure that such access is provided

on the bridge as soon as the retrofit work is done, but in any event no later than December 31, 2003. Further, if the study determines that some access is feasible, Caltrans will, by December 31, 1999, submit to the Commission evidence that the processes for obtaining the necessary funding and securing the necessary authorizations for providing such access on the bridge have been initiated.

While developing the study (and implementation program if necessary), Caltrans will also consult with the Federal Highway Administration, the Bay Trail Project, interested regional bicycle, pedestrian and disabled persons organizations, the Cities of Richmond and San Rafael, the Golden Gate Bridge, Highway and Transportation District, and the Counties of Contra Costa and Marin.

The study (and implementation program if necessary) will address, at a minimum, the following: (a) safety issues related to motorized and non-motorized travel on the same roadway and any standards associated with these safety issues, both on the bridge and on the bridge approaches; (b) removing all legal impediments which make it against the law to ride a bicycle or walk across the bridge; (c) installing the minimum safety improvements for bicycle access across the bridge, such as signs (which alert drivers of the presence of bicycles on the bridge and caution cyclists to proceed at their own risk), new painted stripes in the curb lane to delineate a bike lane, new cones, pylons or similar improvements, new steel plates across the expansion grates to prevent skinny-tired bicycles from getting stuck, and/or new or modified bridge railings; (d) installing the minimum necessary safety improvements for pedestrian and wheelchair access across the bridge; (e) obtaining the funding necessary, and the funding sources that may be available for any of the access alternatives developed; (f) establishing the time period, including the preparation of any environmental documents required by the California Environmental Quality Act, for implementing any of the alternatives developed; (g) potential bicycle, pedestrian and wheelchair patronage on the bridge; and (h) designed standards for bicycle facilities as outlined in the Highway Design Manual Chapter 1000, *Bikeway Planning and Design*.

Therefore, for all the foregoing reasons, the Commission finds that the project is consistent with the Commission's mandated responsibility of ensuring that maximum feasible public access consistent with this project is provided, as required by Section 66602 of the McAteer Petris Act. This finding is not based on the opinion of the California Attorney General's Office regarding the scope of the Commission's legal authority to include specific public access conditions in this permit in lieu of making this finding.

2. **Impacts to Existing Public Access at the Bridge.** A bicycle and pedestrian pathway exists on the easterly shoreline, traveling along the eastbound lane of I-580 from Point Richmond, underneath the East Approach Section of the bridge, and connecting to Western Drive on the north side of the bridge. The portion of the path which travels underneath the bridge will be closed for approximately three months to facilitate the retrofit of the supports in this location.

The permittee explored the possibility of building a temporary structure which would allow for continued access under the bridge during the retrofit. Such a structure was estimated to cost approximately \$35,000 to \$40,000. However, the benefits of providing a temporary structure would not likely be worth this amount of money, and that this amount of money will provide better public benefits by creating permanent improvements to the limited public access on the east side of the bridge.

The permittee investigated enhancements that could be made to improve public access along the Richmond shoreline between Pt. Molate Beach Park to the north of the bridge and the Miller/Knox Regional shoreline to the south to help offset this impact. The Bay Trail Project, the City of Richmond and the East Bay Regional Park District have expressed their desire to improve this section of shoreline because Western Drive, on the north side of the bridge, could become a gateway to new, spectacular public access and coastal recreation opportunities at Point Molate and Point San Pablo.

The permittee's investigation found that the proposed route follows a Southern Pacific railroad spur. The Bay Trail Project staff, appointed to the Blue Ribbon Advisory Committee of the City of Richmond, is actively pursuing the conversion of the spur to a trail. Concerns about converting the spur relate to public safety as the trail would cross property formerly used by a chemical industry. The property is owned by Chevron Refining Company and the U.S. Navy. A schedule for conversion of the rail spur has not been set. Extending the existing bike path would require a joint agreement with Bay Trail, the City of Richmond, and property owners along the permittee's right-of-way. This will likely be a long and involved process, one which will not be completed prior to permit issuance. Additionally, the bike trail extension proposal has not undergone environmental review. Therefore, the permittee and the Commission do not find it feasible to extend the bike path at this time as part of this project. However, the permittee has indicated its willingness to work with staff of the Bay Trail Project as the bike trail plans continue to develop. Therefore, the Commission finds that Special Condition II-F,

which requires the permittee to make a financial contribution consistent with the project impact to help develop this desired east shore Bay access, is needed to offset the adverse impacts of the construction.

Further, the permittee is required, pursuant to Special Conditions II-D and II-E, to install informational signs at the path describing the seismic retrofit project and other bicycle and pedestrian options in the vicinity. There is also informal access on the westerly shoreline prior to the point where the concrete trestle section of the bridge begins out over the water. In addition, on the southerly side of the western approach there are approximately 20 Caltrans parking spaces and a public access concrete pier just east of San Quentin Village. Although the publicly-used shoreline areas on the westerly end of the bridge are within the project boundary, they would not be impacted by the project with the exception of the construction of a new public access and Park-and-Ride facility.

3. **Public Access on Marin County Shoreline.** To increase the public benefits associated with the project, the permittee proposed and is required, pursuant to Special Condition II-G, to construct an approximately 23,971 square-foot public access facility on the northerly shoreline at the west end of the bridge, just east of the Marin Rod and Gun Club. This facility will be designed to provide; a public access area that includes a shoreline path, parking for shoreline access, landscaping, and benches to take advantage of the views of the Bay. To ensure that the public access area remains maintained and available to the public in the future, the public access area is required, pursuant to Special Condition II-G-2, to be permanently guaranteed.

~~Amendment No. Three authorizes the removal of existing cement riprap and installation of approximately 226 lineal feet of new rock slope protection adjacent to the public access at the west end of the bridge, authorizes a revised design for that public access, and revision of Exhibit A. The changes to the public access design are consistent with the 2004 agreement between BCDC and the permittee, which was memorialized in BCDC's September 22, 2004 letter to the permittee from Brad McCrea. Accordingly, the permittee agreed, to offset its delay in installing the required public access improvements, to replace the Park and Ride lot with shoreline access parking, upgrade the signage requirement, increase the total public access area by 20,571 square feet, and to complete this work by December 31, 2005. The revisions to the public access described above do not materially alter the project authorized by the permit and, thus, this amendment is was similar to a minor repair or improvement for which the Executive Director may issue an amendment to a permit, pursuant to Government Code Section 66632(f) and Regulation Section 10622(a).~~

In addition, the Commission is also concerned with preserving and enhancing views to the Bay in new roadway projects whenever possible. Visual access to the Bay from the roadway will not be adversely impacted from the project because no changes are proposed to the bridge railings on the East Approach, West Approach and Main Span sections of the bridge. The exception is on the concrete trestle section because the existing railings would be removed and replaced with new 32-inch-high, concrete safety barriers which would increase views of the Bay from the bridge over the existing barriers. Generally, the Commission has found that the standard 32-inch-high barriers used by Caltrans are low enough so that they do not impact views to the Bay. To ensure that any new railings on the bridge do not exceed 32-inches in height, Special Condition II-V is needed (It should be noted that the project considered and authorized in Material Amendment No. Four of this permit results in a cable railing that is 52-inches in height; however, the cable railing has been specially chosen as it will not impact views to the Bay, as discussed later in this amended permit).

In conclusion, because the project is a retrofit of an existing bridge, the Commission finds, as conditioned herein, the project includes a maximum feasible public access component consistent with the project, and that the project would not create significant adverse impacts to existing public access areas.

- D. **Fish and Wildlife.** Section 66605 of the McAtteer-Petris Act states, in part, that: "...the nature, location and extent of any fill should be such that it will minimize harmful effect to the Bay Area, such as the reduction or impairment of the...fertility of marshes or fish and wildlife resources."

The *San Francisco Bay Plan* also includes findings and policies protecting the fish and wildlife resources of the Bay. The Bay Plan, in part, states: "The benefits of fish and wildlife in the Bay should be insured for present and future generations of Californians. Therefore, to the greatest extent feasible, the remaining marshes and mudflats around the Bay, the remaining water volume and surface area of the Bay, and adequate fresh water inflow into the Bay should be maintained. Specific habitats that are needed to prevent the extinction of any species, or to maintain or increase any species that would provide substantial public benefits, should be protected, whether in the Bay or on the shoreline behind dikes...."

The project has the potential to create adverse impacts to a number of birds, marine mammals, fish and their habitats. One such species is the peregrine falcon, a state and federal government endangered species. No falcon nesting has been observed on the Richmond-San Rafael Bridge, only nesting behavior. Still, to minimize impacts on the falcon, the permittee has been consulting with the USFWS to develop a mitigation program to avoid and/or offset any adverse impacts to the falcon. In this program, which is required by Special Condition II-Q, Caltrans will help fund a

program at the U.C. Santa Cruz Predatory Bird Research Group which will raise peregrine falcon chicks for ultimate release into the wild based upon the U.S. Fish and Wildlife Service Biological Opinion.

The winter-run chinook salmon is also listed as endangered fish species. Of concern is the addition of suspended particle matter in the water resulting from the construction activities that would temporarily affect these fishes' foraging and food resources. In addition, the temporary work platforms on the easterly end of the bridge could potentially create adverse impacts to existing eelgrass beds by compacting and/or disrupting the eelgrass substrate. Eelgrass beds are important rearing habitat for juvenile fish, including Pacific Herring, providing nesting sites, food and shelter. Past efforts in San Francisco Bay to plant and transplant eelgrass have not proven successful. To minimize the impacts on the eelgrass beds, the permittee ~~has~~ agreed, and is required, pursuant to Special Condition II-B, to use pile-supported work platforms instead of solid fill. These pile-supported work platforms could potentially have detrimental impacts on the eelgrass beds as resuspended sediments and the shade from the platforms decrease photosynthesis of the plants and inhibit their growth. Therefore, to protect and restore the eelgrass beds to the greatest extent feasible, as well as protect steelhead, herring and salmon foraging and their food resources, the permittee has developed and is required to implement mitigation measures, pursuant to Special Condition II-M and II-R, with the NMFS, the CDFG, the USFWS and the RWQCB to: (1) minimize turbidity in the water from construction activities; (2) prohibit open water suction dredging in waters shallower than 20 feet between January 1 and May 31 and limit other dredging and construction activities during significant fish migration or spawning activities as directed by the NMFS or the CDFG; and (3) perform pre-and post-project surveys of the eelgrass beds. In addition, because of the potential loss of eelgrass habitat, the permittee is required, pursuant to Special Condition II-~~RS~~, to continue to work with the wildlife agencies (USFWS and NMFS) to develop an experimental eelgrass planting program in the project area if determined necessary.

Other species of concern, while not officially listed as rare or endangered, that still receive special protection by law include harbor seals and the Pacific herring. The harbor seals, which haul out at Castro Rocks about 50 feet south of the bridge, are protected by the Marine Mammal Protection Act. Potential adverse impacts to the seal haul out resulting from the construction of the project are expected to be minimized since pier 55, the closest pier, is founded on rock and would not need dredging or new piles. Mitigation measures to protect the seals have been developed in consultation with the NMFS, as required pursuant to Special Condition II-P, to include work restrictions on piers 54, 55 and 56 from March through June, the pupping and molting season of the seals, as well as establishment of an exclusion zone around Castro Rocks. In addition, the permittee ~~has~~ developed and is required to implement, pursuant to Special Condition II-M, mitigation measures developed in consultation with the NMFS and the CDFG to protect the Pacific herring

from the construction activities during spawns. The Pacific herring's peak spawning season is from December 1 to March 1 and suspended particle matter can suffocate the eggs. Therefore, the permittee has agreed to halt construction activities within 200 meters of a spawning site upon notification from the CDFG for approximately 2 weeks, which should allow enough time for the eggs to hatch.

Last, the project could potentially create adverse impacts to other fish and bird species which use the bridge, most notably the double crested cormorant colony existing underneath the bridge. The project could result in the loss of one year of breeding habitat for the cormorants; however, according to the CDFG, the potential loss of breeding habitat for one year would not be considered a significant adverse impact. Similarly, the loss of breeding habitat for other, more common bird species, such as seagulls, for one year is not considered a significant adverse impact. Still, the permittee will, pursuant to Special Condition II-Q, implement protocols established by the CDFG or the Point Reyes Bird Observatory for handling of these birds during the construction activities. The project would also impact benthic organisms in the Bay muds and on the existing bridge footings. However, it is anticipated that these organisms would quickly recolonize the project site after the dredging episodes and the footing retrofit work are completed. In addition, the new and enlarged piles and piers can provide valuable habitat, food and cover for fish once they are recolonized by benthic organisms.

In conclusion, the Commission finds that, as conditioned, the project minimizes adverse impacts to the fish and wildlife resources of San Francisco Bay and is therefore consistent with the McAteer-Petris Act and the *San Francisco Bay Plan* which require a project to minimize harmful effects to the fish and wildlife.

- E. **Dredging and Water Quality.** Section 66605 of the McAteer-Petris Act states, in part, that: "...the nature, location and extent of any fill should be such that it will minimize harmful effects to the Bay Area, such as the reduction or impairment of...water quality...." Further, the McAteer-Petris Act states, in part, that "dredging is essential to establish and maintain navigational channels for maritime commerce, which contributes substantially to the local, regional, and state economies...." In this case, the dredging associated with the retrofit of the Richmond-San Rafael Bridge, while not dredging a navigation channel, can be viewed as dredging necessary for the maintenance of a significant transportation facility that contributes substantially to the local, regional, and state economies.

The *San Francisco Bay Plan* Dredging Policy No. 1 states: "[d]redging should be authorized when the Commission can find: (a) the permittee has demonstrated that the dredging is needed to serve a water-oriented use or other important public purpose; (b) the materials to be dredged meet the water quality requirements of the San Francisco Bay Regional Water Quality Control Board; (c) important fisheries and Bay natural resources would be protected; and (d) the materials would be disposed of in accordance with [Dredging] Policy 2...." The Bay Plan Dredging Policy No. 2 states: "[d]isposal of dredged materials should be encouraged in non-tidal areas

where the materials can be used beneficially, or in the ocean. Disposal in tidal areas of the Bay should be authorized when the Commission can find that: (a) the permittee has demonstrated that non-tidal and ocean disposal is infeasible; because there are no alternate sites available or likely to be available for use in a reasonable period, or the cost of disposal at alternate sites is prohibitively expensive; (b) disposal would be at a site designated by the Commission; (c) the quality and volume of the material to be disposed is consistent with the advice of the San Francisco Bay Regional Water Quality Control Board; and (d) the period of disposal is consistent with the advice of the Department of Fish and Game and the National Marine Fisheries Service....” The Bay Plan Dredging Policy No. 5 states: “[o]nce non-tidal or ocean disposal sites have been secured or designated, and prior to completion of the LTMS, the maximum feasible amount of dredged material should be disposed of at non-tidal sites or in the ocean. Until non-tidal upland disposal sites are secured and ocean disposal sites designated, aquatic disposal in the Bay should be authorized at sites designated by the U.S. Army Corps of Engineers and the Commission. Dredged materials disposed of aquatically in the Bay, particularly at the Alcatraz Island disposal site, should be carefully managed to ensure that the amount and timing of disposal does not create navigational hazards, adversely affect Bay currents or natural resources of the Bay, or foreclose the use of the site by projects critical to the economy of the Bay Area....”

As mentioned above, the Richmond-San Rafael Bridge is considered a water-oriented use under the McAteer-Petris Act. On April 2, 1997, the multi-agency Dredged Material Management Office (DMMO) reviewed the sediment quality chemical and toxicity analyses for this project and made the recommendation that the majority of sediments to be dredged were suitable for unconfined aquatic disposal. The exception applied to Richmond Composite 13 material located adjacent to piers 71 through 77. In these locations, the DMMO recommended that the entire volume of material which would be removed from piers 71 through 74 (approximately 1,690 cubic yards) and the upper 6 feet of material from piers 75 through 77 (approximately 1,630 cubic yards) be disposed in an appropriate manner at an upland location outside of the Commission’s jurisdiction. Subsequently, the staff of the San Francisco Bay Regional Water Quality Control Board (Regional Board) recommended approval of a Water Quality Certification for this project at its April 16, 1997, Board meeting. This recommendation was adopted by the Regional Board as Resolution No. 97-053 which allows the permittee to dispose of dredged materials from the project site at the Alcatraz Dredged Material Disposal Site (SF-11), a site designated by BCDC for in-bay disposal.

The permittee can dispose up to approximately 215,700 cubic yards in the Bay. The remaining approximately 3,320 cubic yards of material that was determined unsuitable for aquatic disposal will be disposed at an upland location, pursuant to Special Condition II-K. The permittee briefly explored alternative disposal options other than the in-Bay option, but they were found infeasible primarily due to cost. In

addition, because the project is considered an “emergency project” pursuant to the Seismic Retrofit Bond Act of 1996, the permittee does not have unlimited time to explore and develop disposal alternatives.

To prevent navigational hazards, adverse impacts to water quality, and adverse impacts to fish and wildlife resources, the Commission finds that Special Conditions II-I, II-J, II-L, II-M, II-N and II-O are necessary to manage the amount and timing of the dredged materials and their disposal at the Alcatraz dredged materials disposal site. These special conditions include the requirement for water quality analysis, maps of the dredging sites, monitoring of the dredging and disposal activities, and abiding by the annual and monthly disposal targets for the Alcatraz disposal site. As conditioned, the Commission finds that the dredging and dredged material disposal associated with the project serve a water-oriented use, meet the requirements of the RWQCB, minimize adverse impacts to fish and wildlife resources as much as possible, and dispose of the materials unsuitable for aquatic disposal in an appropriate manner in an upland location.

In conclusion, the Commission finds the dredging and dredged material disposal activities are consistent with the Commission’s laws and policies governing water quality, dredging and disposal of dredged materials in San Francisco Bay.

- F. **Priority Land Use Area.** Section 66602 of the McAteer-Petris Act states that: “...certain water-oriented land uses along the Bay shoreline are essential to the public welfare of the Bay Area, and these uses included...water-related industry....” The *San Francisco Bay Plan* also includes findings and policies which protect lands adjacent to the Bay for “priority land uses,” such as water-related industry. As shown on Bay Plan Map No. 411, the easterly portion of the project site, the Chevron refinery property, is designated as a water-related priority land use site.

The project is not located in an area critical to the operations of the Chevron facility. The permittee has also discussed with Chevron the use a portion of the site to access the temporary work platforms and for construction staging areas. In addition, because the bridge already exists and the project would not substantially change the size or use of the bridge, the project will not adversely impact the ability of the site to remain available for water-related industrial purposes.

Therefore, the Commission finds the project will not adversely impact the existing or future use of this designated water-related industry priority use site.

G. **Non-Material Permit Amendments. ~~No. Two.~~**

1. Amendment No. One to the permit involved a time extension to the original authorization. Further, Amendment No. Two authorizes the installation of a security barrier, as required by the California Highway Patrol, at ground-level on the north and south sides of the eastern bridge approach within the Commission’s 100-foot shoreline band. The barrier consists of a 30-inch-high concrete barrier and an adjacent six-foot-tall chain link fence. While the fence makes the access area less

appealing and attractive, it does not physically interfere with use of the adjacent public access path and was determined by the California Highway Patrol to be necessary to maintain the security of the bridge. Therefore, the project involves the placement of a small amount of material that does not affect public access, the environment, or conflict with a priority use designation, and thus is a “minor repair or improvement,” as defined by Regulation Section 10601(b)(1), for which the Executive Director may issue an amendment to a permit pursuant to Regulation Section 10810. Amendment No. Two was issued after-the-fact pursuant to an Enforcement investigation. The issuance of this amendment does not preclude future enforcement action for violations of this permit.

Amendment No. Three authorizes the removal of existing cement riprap and installation of approximately 226 lineal feet of new rock slope protection adjacent to the public access at the west end of the bridge, authorizes a revised design for that public access, and revision of Exhibit A. The changes to the public access design are consistent with the 2004 agreement between BCDC and the permittee, which was memorialized in BCDC’s September 22, 2004 letter to the permittee from Brad McCrea. Accordingly, the permittee agreed, to offset its delay in installing the required public access improvements, to replace the Park and Ride lot with shoreline access parking, upgrade the signage requirement, increase the total public access area by 20,571 square feet, and to complete this work by December 31, 2005. The revisions to the public access described above do not materially alter the project authorized by the permit and, thus, this amendment is similar to a minor repair or improvement for which the Executive Director may issue an amendment to a permit, pursuant to Government Code Section 66632(f) and Regulation Section 10622(a).

H. Material Amendment No. Four for Public Access Improvement Project. The subject of the material amendment involves activities on the Richmond-San Rafael Bridge (in the Bay) and at adjoining sections of I-580 (within the 100-foot shoreline band), which will remain in place for up to a four-year period and result in traffic operational patterns on the eastbound (lower) deck and a multi-use public pathway on the westbound (upper) deck. In the original permit (1997) for the bridge seismic retrofit, the Commission found that a public pathway on the bridge could maximize public access consistent with the project, but did not require Caltrans to provide such an improvement due to a variety of reasons, including safety and operational concerns.

Following issuance of the permit, Caltrans undertook a multi-year study to assess the feasibility of public access on the bridge. The study identified a preferred pathway design: a bi-directional path on the westbound (upper) deck of the bridge separated from traffic by a moveable barrier. However, Caltrans expressed concerns with implementation of the “preferred” alternative, including that highways without shoulders provide less recovery space for errant vehicles, and

over the potential costs to support and maintain a public path. Subsequently, the Commission requested that Caltrans provide additional information to support its conclusions and, in 2009, asked Caltrans to further study the feasibility of undertaking a public access pilot program on the bridge, similar to the one which is the subject of Material Amendment No. Four.

1. **Fill.** Section 66605 of the McAteer-Petris Act provides, in part, that fill: “should be limited to water-oriented uses” or for “minor fill for improving public access to the Bay;” be “the minimum amount necessary to achieve the purpose of the fill”; “the nature, location, and extent of any fill should be such that it will minimize harmful effects to the Bay area...”; be built “in accordance with sound safety standards;” and on property to which the applicant has valid title.

The project involves converting a maintenance/emergency vehicle shoulder at the lower eastbound bridge deck into a regular vehicle travel lane as needed during peak traffic times, and converting a similar shoulder at upper westbound deck into a universally-accessible public pathway with an adjacent traffic barrier and outer safety railing. In addition, the project involves the placement of associated facilities, including signage, and safety cameras. All of these improvements will be placed on the existing, seismically retrofitted bridge and result in no additional coverage of the Bay. Bridges are defined in the McAteer-Petris Act as water-oriented use and the public pathway and related improvements authorized by Amendment No. Four are components of the existing Richmond-San Rafael Bridge. The pedestrian/bicycle/wheelchair pathway is a use that is commonly seen on bridges spanning the Bay and Bay tributaries, whether the bridge is for motorized use or non-motorized use. The fill will not result impact Bay resources nor will it affect the structural stability of the bridge.

The Commission finds that the public pathway and related improvements on the existing bridge are consistent with the Commission’s laws and policies on Bay fill.

2. **Public Access and Views.** Section 66602 of the McAteer-Petris Act states, in part, that “public access to the shoreline and waters of the Bay is inadequate and that maximum feasible public access, consistent with a proposed project, should be provided.” The Bay Plan Transportation Policy No. 4 states, in part, “transportation projects on the Bay shoreline and bridges over the Bay...should include pedestrian and bicycle paths that will either be part of the Bay Trail or connect the Bay Trail with other regional and community trails.”

The Bay Plan policies on public access further state, in part, “...maximum feasible public access to and along the waterfront...should be provided in and through every new development in the Bay or on the shoreline....” Policy No. 7 states, in part, “public access improvements...should be designed and built to encourage diverse Bay-related activities and movement to and along the shoreline, should

permit barrier free access for persons with disabilities to the maximum feasible extent, should include an ongoing maintenance program, and should be identified with appropriate signs.” Policy No. 8 states, in part, “a small amount of fill may be allowed if the fill is necessary and is the minimum absolutely required to develop the project in accordance with the Commission’s public access requirements.” Policy No. 9 states, in part, “access to and along the waterfront should be provided by walkways, trails, or other appropriate means and connect to the nearest public thoroughfare where convenient parking or public transportation may be available.” Policy No. 12 states, “the Public Access Design Guidelines should be used as a guide to siting and designing public access consistent with a proposed project. The Design Review Board should advise the Commission regarding the adequacy of the public access proposed.”

Bay Plan Appearance, Design, and Scenic Views Policy No. 2 states, in part, “All bayfront development should be designed to enhance the pleasure of the user or viewer of the Bay. Maximum efforts should be made to provide, enhance, or preserve views of the Bay and shoreline, especially from public areas, from the Bay itself, and from the opposite shore.” Policy No. 6 states, in part, “guard rails and bridge supports should be designed with views in mind.” The Public Access Design Guidelines advise applicants, in part, to “make public access usable by...maximizing user comfort by designing for the weather and day and night use...and...provide basic public amenities, such as trails, benches...trash containers...lighting...that are designed for different ages, interests, and physical abilities.”

Over an up to four-year pilot period, Caltrans will provide public access on the bridge and adjoining highway connections and associated facilities. The width and design of the pathway will encourage movement by all users, including those with disabilities. A traffic barrier and an outer safety cable railing will be installed—the design of the outer railing will maximize views of the Bay for pathway visitors. Caltrans will install signage to guide users to nearby parking, including distances to destinations and landmarks. Public parking is available at vista points near the bridge approach to Marin County, the Bay Business Park, and at Point Molate State Beach in Contra Costa County. Public transportation is available in Richmond and San Rafael, connecting the paths to larger public transportation systems, including the Larkspur ferry terminal. All project elements will be maintained by Caltrans.

At its connections immediately outside the Commissions jurisdiction, and at connecting pathways and facilities located nearby in Contra Costa County and Marin County under the aegis of Caltrans, the permittee will permanently realign the proposed bridge pathway to East Francisco Boulevard from Main Street and Grange Avenue; will permanently widen Main Street (Marin County) at the area located between the RSR eastbound and westbound ramps to accommodate two 4-foot-wide Class II striped bike lanes and one 5-foot-wide sidewalk; will

permanently install a solid barrier at East Standard Avenue in the City of Richmond (Contra Costa County) to separate bicycle, and pedestrian traffic from vehicles and to link existing bicycle paths on Tewksbury Avenue and Marine Street located in Point Richmond; will permanently install a Class I, bi-directional bicycle and pedestrian path separated from vehicle traffic by a solid barrier along the north side of westbound I-580, from the Marine Street interchange (Contra Costa County) to Stenmark Drive and the Toll Plaza; will permanently widen the I-580 off-ramp to Stenmark Drive (Contra Costa County) to accommodate a 10-foot-wide bi-directional bicycle and pedestrian path separated from vehicle traffic by a concrete barrier; will install a crosswalk at Stenmark Drive to connect to a trail to Point Molate; and will permanently replace safety railings with a screen to block adjacent fuel pipelines at the Scofield Avenue undercrossing in Richmond (Contra Costa County), providing connections to San Francisco Bay Trail segments located in the City of San Rafael, and proposed Bay Trail extensions to Point Molate. Bicycle/pedestrian counters would be installed on both sides of the Bridge to collect usage data.

On January 11, 2016, the Commission's Design Review Board (DRB) reviewed the Project. The DRB asked the permittee to: (1) consider the proposed bridge pathway and its connections from a regional perspective, and to map present and future pedestrian and bicycle routes within this region of the Bay to learn how the project will best fit within this network; (2) make clear and safe connections to the bridge pathway on both sides of the bridge in order to "position the project for success," and work with the surrounding jurisdictions to create safe connections; (3) decrease the size of the vertical posts as much as possible, and provided positive feedback on the cable railing; (4) provide amenities for pathway users, including seating, signage, shelter, water and parking; (5) explore the possibility of including some lower lighting closer to the pathway to supplement the tall pole lights that exist now; (6) provide a transparent top portion of moveable barrier in order to maintain views for drivers, bicyclists and pedestrians in addition to increasing the sense of personal safety for pathway users; and (7) add mile markers for safety and orientation purposes on the bridge, and add color or patterns on the pavement of the landside connections leading to the bridge. Following the recommendations from the DRB, the applicant made revisions to the design of the project, including signage, seating, connections, parking, and the railing. Because of the temporary nature of the pilot program, other amenities, such as lighting, would not be installed at present, but revisited if the project remains permanent.

To ensure that the final project is consistent with the Commission's authorization, final plans, including amenities and signage, will be reviewed by the BCDC staff in accordance with Special Condition II-A has been included. Because of the temporary nature of the pilot program, a permanent guarantee, as required in Bay Plan policies on public access, is not required in this amended

permit. However, the permittee is required to install instruments to measure usage of the path, maintain the path for the entirety of the pilot program, report to the Commission at the end of the third year of the pilot program, and seek Commission authorization to make changes to the path, as required in Special Conditions II-G.2, II-G.3, and II-G.4. These Special Conditions will increase the public benefits associated with the project, and position the project for success, as recommended by the Commission's DRB.

To ensure the safety of pedestrians, bicycles, and other path users during and after flood events, and to maximize the amount of time the path is open to users, Special Condition II-H.1 has been included. Special Condition II-V.1 allows the installation of a cable railing that is higher than authorized in the original permit. The new cable railing is necessary to protect the safety of path users, while protecting views of the Bay. After four years, the bi-directional bicycle and pedestrian path on the Richmond-San Rafael Bridge may be made permanent or may return to functioning as a shoulder for vehicles. Therefore, the Commission finds that the project, as conditioned, is consistent with the Commission's laws and policies on public access, and appearance, design, and scenic views.

HI. Public Trust. The approximately 55,800 square feet of new solid and pile-supported fill, approximately 270,000 square feet of pile-supported replacement fill, and approximately 197,000 square feet of temporary, pile-supported and solid fill authorized herein are for the retrofit of an existing bridge, a water-oriented use as defined by Section 66605 of the McAteer-Petris Act. Water-oriented uses are consistent with the public trust. Further, the retrofit work would provide for increased safety of persons and property using the bridge. The project associated with Amendment No. Four will not result in any net increase of Bay fill, is temporary in nature, and facilitates public access to the Bay and shoreline. Thus, the Commission finds that the fill is consistent with the public trust.

IJ. Title. The project is located with the California Department of Transportation right-of-way for the Richmond-San Rafael Bridge. This right-of-way was secured by lease from the California State Lands Commission for the life of the bridge plus one year.

JK. Environmental Review. Pursuant to the Seismic Retrofit Bond Act of 1996, the original project ~~is~~ was statutorily exempt from the California Environmental Quality Act (CEQA) (Public Resource Code). Further, Senate Bill 131, Chapter 15, Section 180.2, specifies that qualifying projects shall be considered to be activities under the CEQA, Section 21080(b)(4), which states that CEQA does not apply to "[s]pecific actions necessary to prevent or mitigate an emergency."

Pursuant to the California Environmental Quality Act (CEQA), Section CCR 15061[b][3], and the National Environmental Policy Act (NEPA), Section 23 USC 327, the California Department of Transportation issued an exemption from environmental review on May 27, 2016 for the project that is the subject of Material Amendment No Four.

~~KL.~~ **Conclusion.** For all of the above reasons, the benefits of the revised project clearly exceed the detriment of the loss of water areas, the impacts to water quality and the impacts to fish and wildlife. Further, the project does not adversely affect current or future maximum feasible public access to and along the shoreline of the Bay, and the project provides maximum feasible public access to the Bay and its shoreline consistent with the project. Therefore, the project is consistent with the *San Francisco Bay Plan*, the McAteer-Petris Act, the Commission's Regulations, and the Commission's amended management program for the San Francisco Bay segment of the California coastal zone.

IV. Standard Conditions

- ~~A. This amended permit shall not take effect unless the permittee executes the original of this amended permit and returns it to the Commission within ten days after the date of the issuance of the amended permit. No work shall be done until the acknowledgment is duly executed and returned to the Commission.~~
- ~~B. The attached Notice of Completion and Declaration of Compliance form shall be returned to the Commission within 30 days following completion of the work.~~
- ~~C. The rights, duties, and obligations contained in this amended permit are assignable. When the permittee transfers any interest in any property either on which the authorized activity will occur or which is necessary to the full compliance of one or more conditions to this amended permit, the permittee/transferor and the transferee shall execute and submit to the Commission a permit assignment form acceptable to the Executive Director (*call for a copy of the form or download it from our website*). An assignment shall not be effective until the assignee executes and the Executive Director receives an acknowledgment that the assignee has read and understands the amended permit and agrees to be bound by the terms and conditions of the amended permit, and the assignee is accepted by the Executive Director as being reasonably capable of complying with the terms and conditions of the amended permit.~~
- ~~D. Unless otherwise provided in this amended permit, the terms and conditions of this amended permit shall bind all future owners and future possessors of any legal interest in the land and shall run with the land.~~
- ~~E. Unless otherwise provided in this amended permit, any work authorized herein shall be completed within the time limits specified in this amended permit, or, if no time limits are specified in the amended permit, within three years. If the work is not completed by the date specified in the amended permit, or, if no date is specified, within three years from the date of the amended permit, the amended permit shall become null and void. If an amended permit becomes null and void for a failure to comply with these time limitations, any fill placed in reliance on this amended permit shall be removed by the permittee or its assignee upon receiving written notification by or on behalf of the Commission to remove the fill.~~

- F. ~~All required permissions from governmental bodies must be obtained before the commencement of work; these bodies include, but are not limited to, the U. S. Army Corps of Engineers, the State Lands Commission, the Regional Water Quality Control Board, and the city and/or county in which the work is to be performed, whenever any of these may be required. This amended permit does not relieve the permittee of any obligations imposed by State or Federal law, either statutory or otherwise.~~
- G. ~~Work must be performed in the precise manner and at the precise locations indicated in your application, as such may have been modified by the terms of the amended permit and any plans approved in writing by or on behalf of the Commission.~~
- H. ~~Work must be performed in a manner so as to minimize muddying of waters, and if diking is involved, dikes shall be waterproof. If any seepage returns to the Bay, the permittee will be subject to the regulations of the Regional Water Quality Control Board in that region.~~
- I. ~~Unless otherwise provided in this amended permit, all the terms and conditions of this amended permit shall remain effective for so long as the amended permit remains in effect or for so long as any use or construction authorized by this amended permit exists, whichever is longer.~~
- J. ~~Any area subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission under either the McAteer Petris Act or the Suisun Marsh Preservation Act at the time the amended permit is granted or thereafter shall remain subject to that jurisdiction notwithstanding the placement of any fill or the implementation of any substantial change in use authorized by this amended permit.~~
- K. ~~Any area not subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission that becomes, as a result of any work or project authorized in this amended permit, subject to tidal action shall become subject to the Commission's "bay" jurisdiction.~~
- L. ~~This permit reflects the location of the shoreline of San Francisco Bay when the permit was issued. Over time, erosion, avulsion, accretion, subsidence, relative sea-level change, and other factors may change the location of the shoreline, which may, in turn, change the extent of the Commission's regulatory jurisdiction. Therefore, the issuance of this permit does not guarantee that the Commission's jurisdiction will not change in the future.~~
- M. ~~Except as otherwise noted, violation of any of the terms of this amended permit shall be grounds for revocation. The Commission may revoke any amended permit for such violation after a public hearing held on reasonable notice to the permittee or its assignee if the amended permit has been effectively assigned. If the amended~~

~~permit is revoked, the Commission may determine, if it deems appropriate, that all or part of any fill or structure placed pursuant to this amended permit shall be removed by the permittee or its assignee if the amended permit has been assigned.~~

- ~~N. Unless the Commission directs otherwise, this amended permit shall become null and void if any term, standard condition, or special condition of this amended permit shall be found illegal or unenforceable through the application of statute, administrative ruling, or court determination. If this amended permit becomes null and void, any fill or structures placed in reliance on this amended permit shall be subject to removal by the permittee or its assignee if the amended permit has been assigned to the extent that the Commission determines that such removal is appropriate. Any uses authorized shall be terminated to the extent that the Commission determines that such uses should be terminated.~~
- A. **Permit Execution.** This amended permit shall not take effect unless the permittee(s) execute the original of this amended permit and return it to the Commission within ten days after the date of the issuance of the amended permit. No work shall be done until the acknowledgment is duly executed and returned to the Commission.
- B. **Notice of Completion.** The attached Notice of Completion and Declaration of Compliance form shall be returned to the Commission within 30 days following completion of the work.
- C. **Permit Assignment.** The rights, duties, and obligations contained in this amended permit are assignable. When the permittee(s) transfer any interest in any property either on which the activity is authorized to occur or which is necessary to achieve full compliance of one or more conditions to this amended permit, the permittee(s)/transferors and the transferees shall execute and submit to the Commission a permit assignment form acceptable to the Executive Director. An assignment shall not be effective until the assignees execute and the Executive Director receives an acknowledgment that the assignees have read and understand the amended permit and agree to be bound by the terms and conditions of the amended permit, and the assignees are accepted by the Executive Director as being reasonably capable of complying with the terms and conditions of the amended permit.
- D. **Permit Runs With the Land.** Unless otherwise provided in this amended permit, the terms and conditions of this amended permit shall bind all future owners and future possessors of any legal interest in the land and shall run with the land.
- E. **Other Government Approvals.** All required permissions from governmental bodies must be obtained before the commencement of work; these bodies include, but are not limited to, the U. S. Army Corps of Engineers, the State Lands Commission, the Regional Water Quality Control Board, and the city or county in which the work is to be performed, whenever any of these may be required. This amended permit does not relieve the permittee(s) of any obligations imposed by State or Federal law, either statutory or otherwise.

- F. Built Project Must Be Consistent with Application.** Work must be performed in the precise manner and at the precise locations indicated in your application, as such may have been modified by the terms of the amended permit and any plans approved in writing by or on behalf of the Commission.
- G. Life of Authorization.** Unless otherwise provided in this amended permit, all the terms and conditions of this amended permit shall remain effective for so long as the amended permit remains in effect or for so long as any use or construction authorized by this amended permit exists, whichever is longer.
- H. Commission Jurisdiction.** Any area subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission under either the McAteer-Petris Act or the Suisun Marsh Preservation Act at the time the amended permit is granted or thereafter shall remain subject to that jurisdiction notwithstanding the placement of any fill or the implementation of any substantial change in use authorized by this amended permit. Any area not subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission that becomes, as a result of any work or project authorized in this amended permit, subject to tidal action shall become subject to the Commission's "Bay" jurisdiction.
- I. Changes to the Commission's Jurisdiction as a Result of Natural Processes.** This amended permit reflects the location of the shoreline of San Francisco Bay when the amended permit was issued. Over time, erosion, avulsion, accretion, subsidence, relative sea level change, and other factors may change the location of the shoreline, which may, in turn, change the extent of the Commission's regulatory jurisdiction. Therefore, the issuance of this amended permit does not guarantee that the Commission's jurisdiction will not change in the future.
- J. Violation of Permit May Lead to Permit Revocation.** Except as otherwise noted, violation of any of the terms of this amended permit shall be grounds for revocation. The Commission may revoke any amended permit for such violation after a public hearing held on reasonable notice to the permittee(s) or their assignees if the amended permit has been effectively assigned. If the amended permit is revoked, the Commission may determine, if it deems appropriate, that all or part of any fill or structure placed pursuant to this amended permit shall be removed by the permittee(s) or their assignees if the amended permit has been assigned.
- K. Should Permit Conditions Be Found to be Illegal or Unenforceable.** Unless the Commission directs otherwise, this amended permit shall become null and void if any term, standard condition, or special condition of this amended permit shall be found illegal or unenforceable through the application of statute, administrative ruling, or court determination. If this amended permit becomes null and void, any fill or structures placed in reliance on this amended permit shall be subject to removal by the amended permittee(s) or their assignees if the amended permit has been

assigned to the extent that the Commission determines that such removal is appropriate. Any uses authorized shall be terminated to the extent that the Commission determines that such uses should be terminated.

L. Permission to Conduct Site Visit. The permittee(s) shall grant permission to any member of the Commission's staff to conduct a site visit at the subject property during and after construction to verify that the project is being and has been constructed in compliance with the authorization and conditions contained herein. Site visits may occur during business hours without prior notice and after business hours with 24-hour notice.

M. Abandonment. If, at any time, the Commission determines that the improvements in the Bay authorized herein have been abandoned for a period of two years or more, or have deteriorated to the point that public health, safety or welfare is adversely affected, the Commission may require that the improvements be removed by the permittee(s), its assignees or successors in interest, or by the owner of the improvements, within 60 days or such other reasonable time as the Commission may direct.

N. Best Management Practices

1. Debris Removal. All construction debris shall be removed to an authorized location outside the jurisdiction of the Commission. In the event that any such material is placed in any area within the Commission's jurisdiction, the permittee(s), its assignees, or successors in interest, or the owner of the improvements, shall remove such material, at their expense, within ten days after they have been notified by the Executive Director of such placement.

2. Construction Operations. All construction operations shall be performed to prevent construction materials from falling, washing or blowing into the Bay. In the event that such material escapes or is placed in an area subject to tidal action of the Bay, the permittee(s) shall immediately retrieve and remove such material at its expense.

O. In-Kind Repairs and Maintenance. Any in-kind repair and maintenance work authorized herein shall not result in an enlargement of the authorized structural footprint and shall only involve construction materials approved for use in San Francisco Bay. Work shall occur during periods designated to avoid impacts to fish and wildlife. The permittee(s) shall contact Commission staff to confirm current restricted periods for construction.